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### ALIGNMENTS

BUT59674

BUT59674

UI-R-FF0-cpf-c-16-0-UI.sl UI-R-FF0 Rattus norvegicus cDNA clone
UI-R-FF0-cpf-c-16-0-UI.sl UI-R-FF0 Rattus norvegicus cDNA clone
UI-R-FF0-cpf-c-16-0-UI 3', mRNA sequence.

BUT59674.1 GI:23723459

BUT59674.1 GI:23723459

EST.

Rattus norvegicus (Norway rat)

Rattus norvegicus

Evkaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;

Rattus.

I (bases 1 to 616)

Bonaldo,M.F., Lennon,G. and Soares,M.B.

Normalization and subtraction: two approaches to facilitate gene discovery

Genome Res. 6 (9), 791-806 (1996)

E 9704477

B 889548

Coordinated Laboratory for Computational Genomics
University of Iowa
375 Newton Road, 4156 MEBRF, Iowa City, IA 52242, USA

Fel: 319 335 8250

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Frax: 319 335 8250

Frax: 319 335 8250

Frax: 319 335 8250 RESULT 1 BU759674/c LOCUS DEFINITION SOURCE ORGANISM ACCESSION VERSION KEYWORDS JOURNAL MEDLINE PUBMED COMMENT REFERENCE AUTHORS TITLE

Email: bento-soares@uiowa.edu

Fri

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RESULT 3
BE569697
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/clone="UI-R-FF0-cpf-c-16-0-UI"
/tissue_type="Mixed tissues"
/dev_stage="Adult"
/lab_host="DH10B (Life Technologies) (Tl phage resistant)"
/clone_lib="UI-R-FF0"
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polylinker; Site_l: EcoR I; Site_2: Not I; UI-R-FF0 is a
subtracted cDNA library containing the following
tissue(s): Normal cartilage and SR-JWS Tumor Line . The
subtraction was made according to Bonaldo, Lennon and
Soares, Genome Research, 6:791-806, 1996. The
oligonucleotide used to prime the synthesis of
first-strand cDNA contains a library tag sequence that is
located between the Not I site and the (dT)18 tail. The
sequence tags for these libraries are: CTAATGGACG,
CATTCTTGTA.
                  University of Iowa
University of Iowa
sity of Iowa
may obtain clones
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          cDNA Library preparation: Dr. M. Bento Soares, University cDNA Library Arrayed by: Dr. M. Bento Soares, University DNA Sequencing by: Dr. M. Bento Soares, University of Iow Clone Distribution: DISTRIBUTION: Researchers may obtain from Research Genetics (www.resgen.com).

The following repetitive elements were found in this cDNA sequence: 1-26, >POLY A#Simple_repeat (matched compliment) Seq primer: M13 FORWARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGCTGGCCATGAAGCTGTTCACTTGCTTGCAGGTCCTAGCTGGGTTGGC
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Procurement: Jeff Stevens, University of Iowa
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Pred. No. 1.1e-113;
0; Mismatches 3;
                                                                                                                                                                                                                               /organism="Rattus norvegicus
/mol_type="mRNA"
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TAG_LIB=UI-R-FF0
TAG_SEQ=CTAATGGACG"
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Matches 473
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AMGNNUC:MRPE4-00164-G5-A mrpe4 (10380) Rattus norvegicus cDNA clone mrpe4-00164-g5 5', mRNA sequence.
CB797697
CB797697.1 GI:29886174
EST.
Rattus norvegicus (Norway rat)
Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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                                                                                                                                                                                                                                          One Amgen Center Drive, Thousand Oaks, CA 91320-1799, Tel: 805 447-4881
Plate: 00164 row: g column: 5.
Location/Qualifiers
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Best Local Similarity 99.8%; Pred. No. 2.5e-105;
Matches 420; Conservative 0; Mismatches 1; 1
                                                                                                                                                                                                                                                                                            1. .421
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/note="Vector: pSPORT1; Site_1: Siplacenta embryo day 17"
                                                                                                                                                                 1 (bases 1 to 421)
Amgen EST Program.
Amgen Rat EST Program
Unpublished (2003)
Contact: Dan Fitzpatrick
                                                                                                                                                                                                                                  Amgen, Inc
                                                                                                                                                      Rattus.
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VERSION
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AUTHORS
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COMMENT
RESULT 2
CB797697
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1 (bases 1 to 829)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Jeffrey Green M.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov

Plate: LLAM8929 row: o column: 23
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/note="Organ: mammary; Vector: pCMV-SPORT6; Site_2: NotI; Cloned unidirectionally. Primalibrary constructed by Life Technologies. Insproviding samples: Jeffrey Green, M.D., NIH"
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0; Mismatches 36;
   mRNA
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/mol_type="mRNA"
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stop: 721.
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strain="FVB/N"
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larity 92.5%;
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/organism="Mus musculus"
/mol type="mRNA"
/db_xref="taxon:10090"
/clone="IMAGE:30522779"
/lab_host="DH10B (phage-resistant)"
/clone lib="NIH MGC_203"
/note="Organ: placenta; Vector: pExpress-1; Site 1: ECORV;
Site 2: Not1; RNA obtained from three placentas from female C57/BL6 mouse at 16 days pregnancy. Tissues were snap-frozen and kept at -80C for two days before RNA extraction and purification (Tri-reagent method). cDNA was primed using oligo-dT primer:
5'-pGACTAGTTCTAGATCGCGAGCGCCC(T)25-3' and cloned into
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National Cancer Institute / NIH
Bldg. 31 Rm10A07 Bethesda, MD 20892
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Naryan Bhat
cDNA Library Preparation: Express Genomics
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: NDAM599 row: k column: 12
High quality sequence stop: 657.
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Pred. No. 3.3e-105;
0; Mismatches 36; Indels 0;
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AGENCOURT 15765547 NIH MGC 203 Mus musculus cDNA clone IMAGE:30522779 5', mRNA sequence.
CF616127
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                                                                                                                                                                                                                                                                                                                                                                              (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Daniela S. Gerha:
Office of Cancer Genomics
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REFERENCE	TITLE JOURNAL	COMMENT	FEATURES	CDS	polyA_s: polyA_s: ORIGIN Query Matc) Best Local Matches 44	Db 338	.21 Qy 12:
181 CACCCTAATGAAGTGTCTCATATATTCAGTCCGTCATGTGTCCTTCTGAGTCGCTGTAGT 465 106 TACCCTGATGAGGTCTCTCATATTCAGTCCGTCATGTGTCCTTCTGAGTCGCTGTAGT 465 241 GGCTGCTGTGGTGTCTCTGCTGTGTGCTCTTCTGAGTCGCTGTAGT 465 241 GGCTGCTGTGGTGTCTGCATATTCAGTCGGTCTAAAGACAGCCCAACATCACTATG 300	361       CAGGATGTACTCTGCAATGCAGGCCTATTCTGGAGACGAAAGGCAGAAAAGGAAAA       420	AK042891 Mus musculus 7 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:A730035M09 product:placental growth factor,		10349636 2 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000) 20499374 11042159	Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system384-format Genome Res. 10 (11), 1757-1771 (2000)	4 The RIKEN Genome Exploration Research Group Phase II Team and the FANTOM Consortium. FUNCTIONAL annotation of a full-length mouse cDNA collection Nature 409, 685-690 (2001)	The FANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team. Analysis of the mouse transcriptome based on functional annotation
2	දු අ දු	RESULT 5 AK042891 LOCUS DEFINITION	VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL	PUBMED REFERENCE AUTHORS TITLE JOURNAL MEDLINE PUBMED	AUTHORS TITLE JOURNAL MEDLINE PUBMED	REFERENCE AUTHORS TITLE JOURNAL	AUTHORS TITLE

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Adachi, J., Alzawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramcto, K., Hiraoka, T., Hirozane, T., Hayashida, K., Hayatsu, N., Hiramcto, K., Hiraoka, T., Hirozane, T., Hayashida, K., Imotani, K., Ishi, Y., Itoh, M., Kagawa, T., Hirozane, T., Katoh, H., Kavai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Nakami, V., Kajima, T., Miyazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, R., Shiraki, T., Tomaru, A., Takahashi, F., Takaku-Akahira, S., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Direct Submission

Direct Submission

L. Direct Submission

Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genome Canter (3SC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, Fax:81-45-503-9216)

CDNA library was prepared and sequenced in Mouse Genome Envision of Experimental Animal Research in Riken contributed to prepare mouse tissues.

Please visit our web site for further details.

URL:http://genome.gsc.riken.go.jp/, URL:http://fentom.gsc.riken.go.jp/, Institute, 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ATGCTGGCCATGAAGCTGTTCACTTGCTTGCAGGTCCTAGCTGGGTTGGCTGTGCAC
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Pred. No. 4.1e-105;
0; Mismatches 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mol_type="mRNA"

/strain="C57BL/6J"

/db_xref="FANTOM_DB:A730035M09"

/db_xref="MG1:2407996"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tissue type="cerebellum"
clone lib="RIKEN full-length
dev_stage="7 days neonate"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Mus musculus"
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clone="A730035M09"
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/note="putative"
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92.5%;
Nature 420, 563-573
6 (bases 1 to 1583)
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Matches 435
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AK088943
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
Bonaldo, Ph.D.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: NCI-CGAP clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM11646 row: g column: 15
High quality sequence start: 9
High quality sequence stop: 816.
                                                                                                                                                                                                  GTAGT
                                          GTAGT
                                                                             GGAAA
                                                                                                                                                                   CTATG
                                                                                                             CAGATCTTAAAGATTCCCCCCAATCGGGATCCACATTCCTACGTGGAGATGACATTCTCT
                                                                                                                               CAGATCTTGAAGATTCCCCCAATCGGGATCCACATTTCTATGTGGAGATGACATTTTTT
GAAGTGTGGGGTCGCAGCTACTGTCGGCCCATGGAGAAGCTGGTGTACATCTTGGATGAA
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                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Muril 1 (bases 1 to 936)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                   CAGGATGTACTCTGCGAATGCAGGCCTATTCTGGAGACGACAAAGGCAGAAAGGA
                                                                 GGCTGCTGTGGTGACGAGGGTCTGCACTGTGGGGGCGCTAAAGACAGCCAACATCA
                                                                                                                                                                                                                                                                                BI905649
603167660F1 NCI_CGAP_Lu33 Mus musculus cDNA clone IMAGE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'mol_type="mRNA"
'strain="Czech II"
'db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                      (house mouse)
                                                                                                                                                                                                                                                                                                                                GI:16168209
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AUTHORS
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COMMENT

SOURCE

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HTC 20-SEP-2003
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                                                                                      09
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Mus musculus 2 days neonate thymus thymic cells cDNA, RIKEN
full-length enriched library, clone:E430032N09 product:placental
growth factor, full insert sequence.
AK088943

AK088943.1 GI:26105001

HTC; CAP trapper.
Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new 920499374
                                                                                  ATGCTGGCCATGAAGCTGTTCACTTGCTTCTTGCAGGTCCTAGCTGGGTTGGCTGTGCAC
                                                                                                                                                                       TCCCAGGGGGCCCTGTCTGCTGGGAACAACTCAACAGAAATGGAAGTGGTGCCTTTCAAT
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                                           Indels
ore 412.8; DB 12
ed. No. 2.3e-103;
Mismatches 37;
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   Score
Pred.
                                           0;
   86.5%;
92.2%;
                                               Conservative
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us-10-071-370a-3

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Gaps

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 932)

2 NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)

Contact: Robert. Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Dr. David Rowe

cDNA Library Preparation: Invitrogen Corp

cDNA Library Preparation: Invitrogen Corp

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: NDAMO041 row: 1 column: 20

High quality sequence start: 15

High quality sequence store: 671.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           694 CAGGATGTGCTCTGTGAATGCAGACCTATTCTGGAGACGACAAAGGCAGAAAGGAGAAA
                                                                                                                                                                  TCCCAGGGGCCCTGTCTGCGGAACAACTCAACAGAATGGAAGTGGTGCCTTTCAAT
                                                                                                                        ATGCTGGTCATGAAGCTGTTCACTTGCTTCTTACAGGTCCTAGCTGGGTTGGCTG-GCAT
                                                                                                                                                                                                                                                                                  CACCCTAATGAAGTGTCTCATATATTCAGTCCGTCATGTGTCCTTCTGAGTCGCTGTAGT
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/organism="Mus musculus"

/mol_type="mRNA"

/db_xref="taxon:10090"

/clone="IMAGE:30138619"

/lab_host="DH10B (phage-resistant)"

/clone_lib="NIH_MGC_135"

/note="Vector: pCMVSport6.1; Site_1:
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H
        8.8e-102;
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                             Mismatches
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AGENCOURT 11276143 NIH MGC 135 Mus IMAGE:30138619 5', mRNA sequence. CB204450
CB204450.1 GI:28241906
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     92.28;
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Rukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W.,
Rukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W.,
Rukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W.,
Hayashida, K., Ishi, Y., Ishi, Y., Itoh, M., Kagawa, I., Kasukawa, T.,
Hayashida, K., Ishi, Y., Itoh, M., Kagawa, I., Kasukawa, T.,
Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,
Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,
Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N.,
Sano, H., Sastoh, K., Saitoh, H., Sakai, K., Sakai, K., Sakazume, N.,
Sano, H., Sastoh, R., Saitoh, H., Sakai, F., Takaku-Akahira, S.,
Muramatsu, M. and Hayashizaki, Y.
Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, P.,
Direct Submission
Submitted (16-APR-2002) Yoshinide Hayashizaki, The Institute of
Physical and Chemical Research (RIKEN), Laboratory for Genome
Exploration Research Group, RIKEN Genomic Sciences Center (GSC),
RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama,
Kanagawa 230-0045, Japan (E-mail:genome-resegescriken.go.jp,
RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama,
Library was prepared and sequenced in Mouse Genome
Exploration Research Group, RIKEN
Colopedia Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Exploration Division of Experimental Animal Research in Riken contributed to
prepare mouse tissues.
Tissues were provided by Dr. John Todd (Dept. of Medical Genetics
Welloom Trust/MRC building Addenbrookes Hospital Cambridge) whose
assistance we gratefully acknowledge.
Please visit our web site for further details.
Please visit our web site for further details.
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                                                                                                                                                                                                                                                           The rantom vorters.

Group Phase I & II Team.

Analysis of the mouse transcriptome based on functiona
RIKEN integrated sequence analysis (RISA) system--384-sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                   n of a full-length mouse cDNA coll (2001)
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                                                                                                                                      The RIKEN Genome Exploration Research Group
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/db_xref="MGI:2427840"
/db_xref="taxon:10090"
/clone="E430032N09"
/cell_type="thymic cells"
/tissue_type="thymus"
/clone_lib="RIKEN full-length enr
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/note="placental growth factor (
GB|NM 008827, evidence: BLASTN,
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'mol_type="mRNA"
'strain="NOD"
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Nature 420, 563-573 (2002)
6 (bases 1 to 1579)
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Functional annotation
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Normalized full-length enriched library from pooled mouse embryonic limb, maxilla and mandible, day 12.5, 13.5, 14.5, and 15.5 (size selected for the 0.5-1 kb fragments) Cloned directionally, priming method: Oligo-dT. cDNA enrichment: >1k bp, Average insert size 1.6k bp.
Normalization (Cot value): 7.5 kb. Priming sequence: 5'GACTAGTTCTAGATCGCGGCCGCCC(T)3' Tissue contributed by, David Rowe. Library constructed by ResGen, Invitrogen
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Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Gilbert Smith, Ph.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information cal

found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                   CACCCTAATGAAGTGTCTCATATTCAGTCCGTCATGTGTCTTCTGAGTCGCT
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collex Unpublished (1999)
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AGENCOURT_10017764 NCI_CGAP_Mam2 Mus musculus cDNA
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                                                                                                                                                                                         Score 405.2; DB 14;
Pred. No. 2.9e-101;
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603288511F1 NCI_CGAP_Mam6 Mus musculus cDNA clone IMAGE:5322603 5',
BI663772
BI663772.1 GI:15578005
BST...
Mus musculus (house mouse)
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                                                                                      /db_xref="taxon:10090"
/clone="IMAGE:6486814"
/tissue_type="tumor, biopsy sample"
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/clone_lib="NCI_CGAP_Mam2"
/note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"
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                                                                                                                                                                                                                                                           Length
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                                                                                                                                                                                                                                                          Score 405.2; DB 13;
Pred. No. 2.9e-101;
); Mismatches 38;
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Eukaryota; Metazoa; Chordata; Cran:
Mammalia; Eutheria; Rodentia; Sciu:
1 (bases 1 to 744)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mam:
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
column:
                                                  /organism="Mus musculus'
/mol_type="mRNA"
/strain="FVB/N-3"
             quality sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                     .,
   row: m
                                                                                                                                                                                                                                                             84.9%;
larity 91.8%;
Conservative
  Plate: LLAM14030
High quality seq
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COMMENT

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Dubuque, T

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Euteleostomi

Vertebrata;

Craniata;

Chordata; (Rodentia;

mouse)

Muridae; Murinae;

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Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information
                                                                                                                   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae 1 (bases 1 to 455)
Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubu Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                      Unpublished (1996)
Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis,
Tel: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGI:984942
Seq primer: Primer name ambiguous
High quality sequence stop: 429.
                                                                                                                                                                                                                                                                                   Waterston, R.
The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      quality sequence stop:
Location/Qualifiers
                                      Mus musculus (house
                                                                                            Eukaryota; Metazoa;
                                                                musculus
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                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
/mol_type="mRNA"
/strain="FVB/N"
/db_xref="taxon:10090"
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/tissue_type="infiltrating ductal carcinoma"
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/clone_lib="NCI_CGAP_Mam6"
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/note="Organ: mammary; Vector: pcmv-sporting ductal carcinoma"
/note="Organ: mammary; Vector: pcmv-spor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               166
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution informat
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM11818 row: e column: 04
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Pred. No. 1.6e-100;
); Mismatches 36;
                                                                                                                                                                                                                   High quality sequence stop: 736.
Location/Qualifiers
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larity 92.2%;
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/organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
/clone="IMAGE:1958602"
/tissue type="colon cancer"
/cell line="colon cancer"
/cell line="colon cancer"
/cell line="colon cancer"
/clone lib="Schiller mouse MAC13"
/lab_host="SOLR"
/clone lib="Schiller mouse MAC13"
/note="Vector: pBluescript SK- (Stratagene); Site_1:
ECORI; Site_2: XhoI; Double-stranded cDNA was prepared from cell line MAC13 using primer
5'-GAGAGAGAGAGAGAGAACTAGTCTGAGT(18)-3'. An EcoRI adaptor was used on the 5' end of the cDNA as follows:
5'-AATTCGGCACGAG-3'. The library was size-selected and went through one round of amplification. Average insert size is 1.7 kb, with a range from 0.4-12 kb. This library was constructed by Dr. Martin Schiller (Johns Hopkins University). "
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382; Conser
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18-NOV-1998

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AI272466

uk06c06.yl Schiller mouse MAC13 Mus musculus cDNA clone IMAGE:1958602 5' similar to gb:X80171 M.musculus PlGF m (MOUSE);, mRNA sequence.
AI272466
AI272466.1 GI:3894734

LOCUS

ACCESSION VERSION

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VERSION
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AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone lib="NCI_CGAP_Mam6"
/note="Organ: mammary; Vector: pCMV-SPORT6; Site 1: SalI;
Site 2: NotI; Cloned unidirectionally. Primer: Oligo dT.
Library constructed by Life Technologies. Investigator
providing samples: Jeffrey Green, M.D., NIH"
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                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; 1 (bases 1 to 759)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC Ontact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can Ptound through the I.M.A.G.E. Consortium/LINL at:
http://image.llnl.gov
Plate: LLAM11876 row: I column: 11
                                                                                                                                                                                                                                                                                                                                                                       Consortium (LLNL)
                                                                                                                      EST 18
IMAGE:53
CAGATCTTGAAGATTCCCCCCAATCGGGATCCACATTTCTATGTGGAGATGACAT
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603309146F1 NCI_CGAP_Mam6 Mus musculus cDNA clone
mRNA sequence.
                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     db_xref="taxon:10090"
clone="IMAGE:5345050"
sex="female, virgin"
tissue_type="infiltrating ductal
'dev_stage="5 months"
'lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 361.8; DB 12,
Pred. No. 2.9e-89;
0; Mismatches 32;
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p: 756.
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/organism="Mus musculus"
/mol type="mpN""
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                                                                                                                                                                                                      musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mol_type="mRNA"
strain="FVB/N"
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92.2%;
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BI685632
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/note="Vector: pSPORT1; Site 1: Not I; Site 2: Sal I; Five libraries representing EI0.5/12.5 pancreatic bud, E16.5 pancreas, newborn pancreas, adult pancreas, and adult islets of Langerhans were seperately constructed using SuperScript Plasmid Library kit (Life Technologies). cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BI790853
id09h10.y1 Melton Normalized Mixed Mouse Pancreas 1 N1-MMS1 Mus musculus cDNA clone IMAGE:5662723 5' similar to SW:PLGF_MOUSE P49764 PLACENTA GROWTH FACTOR PRECURSOR;, mRNA sequence.
                                                                                  359
                                                                                                                                        694
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 489)
Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y. and Bowers, Y.

Endocrine Pancreas Consortium
Unpublished (2000)
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E16.5, newborn,
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                                                                                                                                                                                        CAGATCTTAAAGATTCCCCCCAATCGGGATCCACATTCCTACGT-GGAGATGACATTCTC
                                                                                                               CAGATCTTGAAGATTCCCCCCAATCGGGATCCACATTTCTATGTGGGAGATGACATTTTC
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clone_lib="Melton Normalized Mixed Mouse Pancreas 1
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Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave,
MA 02138
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: 617-495-1812
Fax: 617-495-8557
Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Douglas Melton DNA s
Washington University Genome Sequencing Center For obtaining a clone please contact: Juliana Brown (brown@fas.harvard.edu)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 from the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGI:1949049 This sequence now available from for clone orders contact: info@image.llnl.gov Seq primer: -40RP from Gibco
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clone="IMAGE:5662723"
sex="Both for embryonic
dult islet"
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strain="ICR"
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Idult, mixed"
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Mammalia; Eutheria;
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                                             and mixed in equal amounts. The mixed library DNA was normalized by method #4 from Bonaldo, Lennon, and Soares 1996 Genome Research 6:791-806; 0.5 microgram single-stranded mixed library plasmid DNA was mixed with 5 micrograms PCR product representing mixed library inserts and hybridized to an Ecot of 6. Single-stranded (unhybridized) plasmids were isolated by hydroxyapatite chromatography and used to make this library."
                                 prepared
DNA was
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was made by oligo-dT priming and size-selected by fractionation. Libraries were amplified once on support and plasmid DNA from each library was pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (LLINL)
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eut

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mu

1 (bases 1 to 958)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collectio
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                         Length 489
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AGENCOURT_11363121_updated NIH_MGC_137 Mus musculus IMAGE:6432281 5', mRNA sequence.
CF582990
CF582990.1 GI:35196252
EST.
                                                                                                                                                                                                                                                          Indels
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Pred. No. 3.6e-89;
; Mismatches 33;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Daniela S. Gerhard, Ph. Office of Cancer Genomics
National Cancer Institute / NIH
Bldg. 31 Rm10A07 Bethesda, MD 2(
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gerard Gradv
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llarity 92.0%;
Conservative
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AUTHORS
TITLE
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SOURCE

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/lab_nose= which was 137"
/clone lib="NIH_MGC_137"
/clone lib="NIH_MGC_137"
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Site 2: NotI; Library consists of a pool of clones
rearrayed from the following libraries: Melton normalized
mixed mouse pancreas 1 N1-MMS1, Amplified Melton mouse
islets 1 MIS1-A, and Kaestner ngn3 wt. Clones rearrayed in
the laboratory of K. Kaestner (University of
Pennsylvania). Note: this is a NIH_MGC Library."
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mul
1 (bases 1 to 908)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
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Pred. No. 4.7e-89;
0; Mismatches 33;
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found through the I.M.A.G.E. Conshttp://image.llnl.gov
Plate: IRBD25 row: b column: 06
High quality sequence start: 15
High quality sequence stop: 537.
Location/Qualifiers
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602902409F1 NCI_CGAP_Mam3 M.

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Mus musculus (house mouse)
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/note="Organ: mammary; Vector: pcm, vector:
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     ng Ph.D.
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High quality sequence stop: 788.
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Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Patent No.	Sequence	Sequence	Sequence	Sequence	Seguence	Seguence	Sequence	Seguence	Seguence	Sequence
US-09-392-931-7	US-08-586-039B-48	9-769-4	US-09-244-583-29	2-932-1	US-09-574-708A-9	US-09-392-931-9	5240848-6	US-08-586-039B-34	US-09-699-769-34	-244-5	US-09-244-583-27	US-09-519-476-1	US-09-392-932-6	US-09-574-708A-1	US-09-392-931-1	PCT-US95-10973A-88	PCT-US95-10973A-86
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# ALIGNMENTS

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           Sequence 38, Application US/08586039B

Patent No. 6140073

GENERAL INFORMATION:
APPLICANT: Bayne, Marvin L.
APPLICANT: Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
TITLE OF INVENTION: SUBUNIT
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck & Co., Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 477;
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COUNTRY: USA
ZIP: 07065-0900
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/586,039B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 16-JAN-1996
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DA
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (908) 594-3905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18361DA
                                                                                                                                                                                                                             126 E. Lincoln Avenue
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (908) 594-3905
TELEFAX: (908) 594-4720
INFORMATION FOR SEQ ID NO: 38
SEQUENCE CHARACTERISTICS:
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  nucleic acid
  EDNESS: single
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CITY: Rahway
STATE: New Je
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Query Match Best Local S Matches 477

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3-09-699-769-38
Sequence 38, Application US/09699769
Sequence 38, Application US/09699769
Patent No. 6569434
GENERAL INFORMATION:
APPLICANT: Bayne, Marvin L.
Thomas Jr., Kenneth A.
Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
C SUBUNIT
ATGCTGGCCATGAAGCTGTTCACTTGCTTCTTGCAGGTCCTAGCTGGGTTGG
                                                     TCCCAGGGGCCCTGTCTGCTGGGAACAACTAACAGAAATGGAAGTGGTGC
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APPLICATION NUMBER: US/09/699,769
FILING DATE: 30-Oct-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DB
TELECOMMUNICATION INFORMATION:
TELEPHONE: (732) 594-3905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 08/586,039
FILING DATE: 16-JAN-1996
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck & Co., Inc.
STREET: 126 E. Lincoln Avenue
CITY: Rahway
STATE: New Jersey
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ZIP: 07065-0900
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APPLICANT: Bayne, Marvin L.
APPLICANT: Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CE
TITLE OF INVENTION: SUBUNIT
NUMBER OF SEQUENCES: 49;
CORRESPONDENCE ADDRESS:
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Pred. No. 9.8
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16-JAN-1996
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ZIP: 07065-0900

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Microsoft Word 6

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/586,039

FILING DATE: 16-JAN-1996
                                                            ;
TOPOLOGY: linear
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MOLECULE TYPE: DNA (genomic)
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SEQUENCE DESCRIPTION: SEQ ID
US-09-699-769-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EE: Merck & Co., Inc.
126 E. Lincoln Avenue
         INFORMATION FOR SEQ ID NO: 38:
SEQUENCE CHARACTERISTICS:
LENGTH: 477 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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STATE: Ne
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Pred. No. 8.1e-128;
0; Mismatches 0;
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TITLE OF INVENTION: VASCULAR ENDOTHELIAL
C SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Avenue
                                                                                                REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DA
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 36, Application US/09699769
Patent No. 6569434
GENERAL INFORMATION:
APPLICANT: Bayne, Marvin L.
Thomas Jr., Kennet
                    APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck & Co.,
STREET: 126 E. Lincoln
CITY: Rahway
STATE: New Jersey
                                                                                                                                                                                                                                                                       86.8%; Scc
100.0%; Pr
                                                                                                                                                                                                                                          DNA (genomic)
                                                                                                                                       (908) 594-3905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
ZIP: 07065-0900
COMPUTER READABLE FORM:
                                                                                                                                    TELEPHONE: (908) 594-39(
TELEFAX: (908) 594-4720
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                         417 base pairs
nucleic acid
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                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.
Matches 414; Conservative
                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                single
          APPLICATION DATA:
                                                                                     NAME: Hand, J. Mark
REGISTRATION NUMBER:
                                                                                                                                                                                                                              linear
CLASSIFICATION
                                                                                                                                                                                                                             TOPOLOGY: li
                                                                                                                                                                                                      TYPE: nucle:
STRANDEDNESS
                                                                                                                                                                                                                                                       US-08-586-039B-36
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US-09-699-769-36
                                                                                                                                                                                         LENGTH:
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: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ore 414; DB 4; Lured. No. 8.1e-128;
Mismatches 0;
                                                         CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/699,76
FILING DATE: 30-Oct-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/586,039
FILING DATE: 16-JAN-1996
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                 ALLORNEL, FOLLET, J. Mark
NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361D|
TELECOMMUNICATION INFORMATION:
TELEPHONE: (732) 594-3905
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
US-08-586-039B-44
; Sequence 44, Application US/08586039B
; Patent No. 6140073
; GENERAL INFORMATION:
; APPLICANT: Bayne, Marvin L.
; APPLICANT: Thomas Jr., Kenneth A.
; TITLE OF INVENTION: VASCULAR ENDOTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
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SEQUENCE DESCRIPTION: SEQ ID
-09-699-769-36
                                                                                                                                                                                                                                                                                                                                   594-4720
0: 36:
                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 417 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
CULE TYPE: DNA (genomic)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               86.8%;
100.0%;
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MATION FOR SEQ ID NO: 36
SEQUENCE CHARACTERISTICS
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Best Local Similarity
Matches 414; Conser
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Matches 336
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 230.2; DB 3;
Pred. No. 1.2e-66;
); Mismatches 118;
                                                                                                                                                                                  MBER: US/08/586,039B
16-JAN-1996
                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DA
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                 APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
                                                      Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              · 0
TITLE OF INVENTION: SUBUNIT NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck & Co., Inc. STREET: 126 E. Lincoln Avenu
                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
SOFTWARE: Microsoft Word 6
                                                                                                                                                                                                                                                                                                                                                                      (908) 594-3905
(908) 594-4720
S SEQ ID NO: 44:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48.3%;
illarity 71.6%;
Conservative
                                                                                                                                   Floppy disk
                                                                                                                                                                                                                                                                                        FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Hand, J. Mark
                                                                                                                                                                                                                                                                                                                                                                                                                          : 513 base pairs
nucleic acid
3DNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                              CHARACTERISTICS:
                                                                                                                                                                                   CURRENT APPLICATION DATA
APPLICATION NUMBER: US
FILING DATE: 16-JAN-1
                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                    NAME: Hand, J. Mark
REGISTRATION NUMBER:
                                                                                New Jersey
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Matches 336; Conser
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MOLECULE TYPE:
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                                                                                          COUNTRY: U
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                                                    STREET:
CITY: R
STATE:
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418 GAAAGGAGGACCCCAAGGGCAGGGGAAGAGGAGAGAAGCAGA
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Pred. No. 1.2e-66;
); Mismatches 118;
                                                                                                                                                                                 th A. ENDOTHELIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/699,769
FILING DATE: 30-Oct-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/586,039
FILING DATE: 16-JAN-1996
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DB
                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
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                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck & Co., Inc.
STREET: 126 E. Lincoln Avenue
CITY: Rahway
STATE: New Jersey
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MOLECULE TYPE: DNA (genomic)
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SEQUENCE DESCRIPTION: SEQ ID NO:
US-09-699-769-44
                                                                                                                                                          APPLICANT: Bayne, Marvin L.
Thomas Jr., Kenneth
TITLE OF INVENTION: VASCULAR EN
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TELEPHONE: (732) 594-3905
TELEFAX: (732) 594-4720
                                                                                            Sequence 44, Application US/09699769
Patent No. 6569434
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                   STATE: New Jersey
COUNTRY: USA
ZIP: 07065-0900
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 513 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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SEQUENCE CHARACTERISTICS
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                                                                                                          358 CTGACGTTCTCTCAGCACGTTCGCTGCGAATGCCGGCCTCTGCGGGAGAAGATGAAGCCG
CTGCGCTGCACCGGCTGCTGCGACACTGCACTGTGTGCCGGTGACGGCCC
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Pred. No. 1.5e-66;
0; Mismatches 112
                                                                                                                                                                                                                                                              Bayne, Marvin L.
Thomas Jr., Kenneth A.
VENTION: VASCULAR ENDOTHELIAL CELL
VENTION: SUBUNIT
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16-JAN-1996
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R: 18361DA
                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/586,03
                                                                                                                                                                                                                              ), Application US/08586039B 6140073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                     Merck & Co., Inc.
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est Local Similarity 72.3%;
atches 332; Conservative
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SEQ ID NO:
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nucleic acid
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MEDIUM TYPE: Floppy
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CLASSIFICATION:
IOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Hand, J. Mark
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
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APPLICANT: Bayne,
APPLICANT: Thomas
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STATE: New J
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MOLECULE TYP:
US-08-586-039B-40
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                                                             GTGCCTTTCAATGAAGTGTGGGGCCGCAGCTACTGCCGGCCAATGGAGAAGCTGGTGTAC
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Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
C SUBUNIT
NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                         447
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NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DB
ECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: New Jersey
COUNTRY: USA
ZIP: 07065-0900
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
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APPLICATION NUMBER: US/09/699,769
FILING DATE: 30-Oct-2000
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/586,039
FILING DATE: 16-JAN-1996
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
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Sequence 40, Application US/09699769
Patent No. 6569434
GENERAL INFORMATION:
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TYPE: nucleic acid
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck &
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                                                                                                                       ATGCTGGCCATGAAGCTGTTCACTTGCTTGCAGGTCCTAGCTGGGTTGG
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nes 112;
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                                                                 Score 229.8; Pred. No. 1.5e. 0; Mismatches
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                             40
; MOLECULE TYPE: DNA (genomic); SEQUENCE DESCRIPTION: SEQ ID NO: US-09-699-769-40
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27-SEP-1990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Best Local Similarity 72.3%;
Matches 332; Conservative
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: 1850 M Street,
Washington
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ADDRESSEE: BEVERIDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-039-297B-1; Sequence 1, Application U; Patent No. 5919899; GENERAL INFORMATION:
APPLICANT: PERSICO, M; APPLICANT: MAGIONE, E
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FILING DATE: 27-SE
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TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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CLASSIFICATION:
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                                                                                                                                                                                                                       Score 213.6; DB 2;
Pred. No. 7.5e-61;
); Mismatches 139;
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; Sequence 46, Application US/08586039B
; Patent No. 6140073
; GENERAL INFORMATION:
; APPLICANT: Bayne, Marvin L.
; APPLICANT: Thomas Jr., Kenneth A.
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL CE:
; TITLE OF INVENTION: SUBUNIT
; NUMBER OF SEQUENCES: 49
                                         573
          NAME: Weilacher, Robert G
REGISTRATION NUMBER: 20,531
REFERENCE/DOCKET NUMBER: 4857
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-659-2811
TELEFAX: 202-659-1462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck & Co., Inc.
STREET: 126 E. Lincoln Avenue
                                                                                                                                                                                                                                                    0;
                                                                                           ; TELEX: WUI64470
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1645 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-039-297B-1
                                                                                                                                                                                                                         44.8%;
INFORMATION:
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1: New Jersey
1RY: USA
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Best Local Similarity
Matches 332; Conser
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STATE: N
COUNTRY:
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Pred. No. 5e-61;
); Mismatches 103;
                                                                                                                                                                                  MBER: US/08/586,039B
16-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36,545
R: 18361DA
                  COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Microsoft Word 6

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                       08/124,259
                                                                                                                                                                                                                                                                                                                                                      MMBER: 07/676,43
28-MAR-1991
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nilarity 72.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (908) 594-3905
TELEFAX: (908) 594-4720
INFORMATION FOR SEQ ID NO: 46
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 08/12
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/6
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 450 base pairs
nucleic acid
EDNESS: single
                                                                                                                                                                                                                                          CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            416
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                                                                                                                                                                                                                      FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 CTGCGCTGCACCGGCTGCTGCGGCGATGAGAATCTGCACTGTGTGCGGTGGAGACGGCC
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                             FACTOR
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CANT: Bayne, Marvin L.
Thomas Jr., Kenneth A.
OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH
C SUBUNIT
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                                                                                                                                                                                                                                                                                           699,769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DB
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/586,039
FILING DATE: 16-JAN-1996
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46:
                                                                                                                                                                          ZIP: 07065-0900
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (732) 594-4720
ORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
LENGTH: 450 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 46
                                                                                      STREET: 126 E. Lincoln Avenue CITY: Rahway STATE: New Jersey COUNTRY.
                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/
FILING DATE: 30-Oct-2000
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2) 594-3905
594-4720
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sl Similarity 72.4%;
310; Conservative
                                                              NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck
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                                                                                                                                                              COUNTRY: USA
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 APPLICANT:
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US-09-699-769-46 ; Sequence 46, Application US/09699769 ; Patent No. 6569434 ; GENERAL INFORMATION:

RESULT

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APPLICANT: Baird, J. Andrew
Chandler, Lois Ann
Sosnowski, Barbara A.
TITLE OF INVENTION: COMPOSITIONS CONTAINING NUCLEIC ACIDS AND LIGANDS FOR THER!
NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
   CCCCTGATGCGATGCGGGGGCTGCTGCAATGACGAGGGCCTGGAGTGTGTGCCCCACTGAG
                                   ACAGCCAACATCACTATGCAGATCTTAAAGATTCCCCCCAATCGGGATCCACATTCCTAC
                                                                                               GTGGAGATGACATTCTCTCAGGATGTACTCTGCGAATGCAGGCCTATTCTGGAGACGACA
                                                                     -CATA
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Pred. No. 3.2e-26;
; Mismatches 132;
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APPLICATION NUMBER: US/09/449,249
FILING DATE: 24-No. 6503886-1999
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/718,904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 24-SEP-1996
ATTORNEY/AGENT INFORMATION:
NAME: No. 6503886tenburg Ph.D.,
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 760100.
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                   US-09-449-249-3; Sequence 3, Application US/09449249; Patent No. 6503886; GENERAL INFORMATION:
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TYPE: nucleic acid
STRANDEDNESS: double
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SEQUENCE CHARACTERISTICS
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ilarity 59.8%;
Conservative
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OTHER INFORMATION:
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STATE: Washing
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ZIP: 9810
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Matches 201; Conser
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                                                                                                                                                                      APPLICANT: Baird, J. Andrew
APPLICANT: Chandler, Lois Ann
APPLICANT: Sosnowski, Barbara A.
TITLE OF INVENTION: COMPOSITIONS CONTAINING NUCLEIC ACIDS AND NUMBER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and not contained.
CTCAGGATGTACTCTGCGAATGCAGGCCTATTCTGGAGACGA
                   CTGACGTTCTCTCAGCACGTTCGCTGCGAATGCCGGCCTCTGCGGGAGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "leader sequence-encoding DNA"
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                                                                                                                                                                                                                                                                                                                                                                               ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                            701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 108.8; DB 3;
Pred. No. 3.2e-26;
0; Mismatches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39,317
IR: 760100.415C1
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APPLICATION NUMBER: US/08/718,904
FILING DATE: 24-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ph.D.,
                                                                                                                                                                                                                                                                                                           3: SEED and BERRY LLP 6300 Columbia Center,
                                                                                                                                                                   3, Application US/08718904
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6037329tenburg
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llarity 59.8%;
Conservative
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TELEFAX: (206) 682-6031
FORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : 677 base pairs
nucleic acid
EDNESS: double
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REGISTRATION NUMBER:
                                                             416
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OTHER INFORMATION:
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                                                                                                                                                                                Patent No. 6037329
GENERAL INFORMATION:
APPLICANT: Baird, A
ATGACATTCT
                                                                                           GAAAGGTG
                                                             GAAAGGAG
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CITY: Seattle
STATE: Washing
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CLASSIFICATION:
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Best Local Simi
Matches 201;
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CONTAINING NUCLEIC ACIDS AND LIGANDS FOR
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                                                                                                       GIGIACATIGCAGAIGAACACCCIAAIGAAGIGICICATATATICAGICCGICAIGIC
                                            GAAGTGGTGCCTTTCAATGAAGTGTGGGGCCGCAGCTACTGCCGGCCAA
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d. No. 3.2e-26;
Mismatches 132;
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RR: 760100.415C1
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APPLICATION NUMBER: US/08/718,90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baird, J. Andrew
APPLICANT: Chandler, Lois Ann
APPLICANT: Sosnowski, Barbara A.
TITLE OF INVENTION: COMPOSITIONS CONVINER OF SEQUENCES: 128
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patentin Release #1.0,
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NAME: No. 6037329tenburg Ph.D.,
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 760100
TELECOMMUNICATION INFORMATION:
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  Pred
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COUNTRY: USA
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
PC compatible
PC-DOS/MS-D
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.larity 59.8%;
Conservative
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N FOR SEQ ID NO:
CHARACTERISTICS:
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TYPE: nucleic acid
STRANDEDNESS: double
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Sequence 4, Application
Patent No. 6037329
GENERAL INFORMATION:
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LOCATION: 13.
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       GAAGTGGTGCCTTTCAATGAAGTGTGGGGCCGCAGCTACTGCCGGCCAATGGAGA
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GENERAL INFORMATION:
APPLICANT: Prizm Pharmaceuticals, Inc.
TITLE OF INVENTION: CONJUGATES OF VASCULAR ENDOTHELIAL GROWTH
NUMBER OF SEQUENCES: 107
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY
STREET: 6300 Columbia Center, 701 Fifth Avenue
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iR: 760100.413PC
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10973A
FILING DATE: 29-AUG-1995
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TELEPHONE: (206) 622-4900
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SEQ ID NO:
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nucleic acid
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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OTHER INFORMATION:
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COMPUTER:
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22.8%; Score 108.8; DB 3;
Best Local Similarity 59.8%; Pred. No. 3.4e-26;
Matches 201; Conservative 0; Mismatches 132;
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; NAME/KEY: CDS
; LOCATION: 13..90
; OTHER INFORMATION:
US-08-718-904-4
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#### AK338153 Sequence L40030 Rattus norv X80171 Mus musculus BC016567 Mus muscul AR117109 Sequence AR338152 Sequence AR338157 Sequence AR338157 Sequence BT008273 Synthetic S72960 Homo sapi BC001422 Homo sapi BC001422 Homo sapi BC001789 Homo sapi BC001789 Homo sapi BC0017255 Homo sapi BC0017255 Homo sapi BC007255 Homo sapi BC0017256 Homo sapi AR117111 Sequence AR338154 Sequence AR338154 Sequence AR338154 Sequence AR338158 Sequence AR338158 Sequence AX743110 Sequence AX743110 Sequence AX743110 Sequence AX743110 Sequence AX587633 Sequence AX587633 Sequence AX587633 Sequence AX743110 Sequence AX587633 Sequence AX157711 Rattus no AC097592 Rattus no AC097592 Rattus no AC07572 Bos tauru BD141690 Chimeric AC07582 Mus muscu BD141691 Chimeric AV157708 Ovis arie Y09268 Artificial BD141692 Chimeric AC006530 Homo sapi AX133758 Canis fam Canis fam Canis fam Gallus ga Sequence Sequence Sequence Sequence Description AR117110 AR338153 AJ133758 AJ133758 AF133249 AF133250 AB011078 AR272184 AR272185 AX780130 SUMMARIES AC006530 GPIVEGFA CFA133758 AF133249 AF133250 AB011078 AR272184 AR272185 MMPGF BC016567 AR117109 AR338152 AR117114 AR338157 BT007182 BT007182 BC007255 AR117111 AR338154 AR338154 AR338154 AR338154 AR117111 AX234464 AX234464 AX234464 AX1171115 AX117115 AX11711690 AX11711690 AX11711690 AX11711690 AX11711691 AX11711691 AR117110 AR338153 RATPLGF MMP1GF DB 2000 1000 Length Query Match Score 47 Result No U Ü

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	AR117110 477 bp DNA	Sequence 38 from patent US 6140073.	AR117110	AR117110.1 GI:14098016		Unknown.	Unknown.	Unclassified.	1 (bases 1 to 477)	Bayne, M.L. and Thomas, K.A. Jr.	Vascular endothelial cell growth factor C subunit	Patent: US 6140073-A 38 31-OCT-2000;	Location/Qualifiers
AR117110	LOCUS	DEFINITION	ACCESSION	VERSION	KEYWORDS	SOURCE	ORGANISM		REFERENCE	AUTHORS	TITLE	JOURNAL	FEATURES

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l (bases 1 to 665)
Disalvo, J., Bayne, M.L., Conn, G., Kwok, P.W., Trivedi, P.G.,
Soderman, D.D., Palisi, T.M., Sullivan, K.A. and Thomas, K.A.
Purification and characterization of a naturally occurring vascular endothelial growth factor.placenta growth factor heterodimer
J. Biol. Chem. 270 (13), 7717-7723 (1995)
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Rattus norvegicus (Norway rat)
Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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                                GAAGTGTGGGGCCGCAGCTACTGCCGGCCAATGGAGAAGCTGGTGTACATTGCAGATGAA
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Pred. No. 5.1e-13;
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Bayne, M.L. and Thomas, K.A. Jr.
Vascular endothelial cell growth factor
Patent: US 6569434-A 38 27-MAY-2003;
Location/Qualifiers
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DiPalma, T., Tucci, M., Russo, G., Maglione, D., Lago, C.T., R. Saccone, S., Della Valle, G., De Gregorio, L., Dragani, T.A., Viglietto, G. and Persico, M.G.
The placenta growth factor gene of the mouse
Mamm. Genome 7 (1), 6-12 (1996)
                                                                                                                                                                                 GGCTGCTGTGTGACGAGGGTCTGCACTGTGGGCGCTAAAGACAGCCAACATCA
                                                                                                                                                                                                                                                                                                    \alpha
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G Marconi 12, 80125 Naples,
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placenta growth factor; PLGF; PLGF-2
Mus musculus (house mouse)
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119...595
/gene="PLGF"
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X80171
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Persico, M.G.
Direct Submission
Submitted (14-JUN-1994) M.G. P.
Genetics and Biophysics, Via G
Location/Qualifiers
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/product="placenta growth factor"
/protein id="CAA56453.1"
/db_xref="GI:1063402"
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Direct Submission
Submitted (22-MAR-1996) M.G. Achen, Ludwig Institute for Cancer
Research, Melbourne Branch, Post Office Box 2008, Royal Melbourne
Hospital, Victoria 3050, Australia
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X96793.
X96793.1 GI:1502350
placenta growth factor.
Mus musculus (house mouse)
                                                                                                                                                                                                                     Score 419.4; DB 10;
Pred. No. 1.1e-114;
); Mismatches 36;
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/gene="PLGF :
1342. .1347
/gene="PLGF ;
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larity 92.5%;
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1 (bases 1 to 1674)
Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
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RSYCRPMEKLVYILDEYPDEVSHIFSPSCVLLSRCSGCCGDEGLHC
LKIPPNRDPHFYVEMTFSQDVLCECRPILETTKAERRKTKGKRKRK
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BC016567
BC016567.1 GI:16741507
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Pred. No. 1.1e-114;
; Mismatches 36;
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                          musculus
                                                               /db_xref="taxon:10090"
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318. .794
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Mammalia; Eutheria;
1 (bases 1 to 1674)
                                   /mol_type="mRNA"
/strain="NIH Swiss"
Location/Qualifiers
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                          organism="Mus
/mol_type="mRN
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larity 92.5%;
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Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, B.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Geen, E.D., Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

L Proc. Matl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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Strausberg, R.

Direct Submission

Submitted (31-OCT-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Gene Collection (MGC), Cancer Genomics Office, National Cancer Teritute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chu-Xia Deng Ph.D
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months old, gross tissue."
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D.M., Nanavati,
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Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Chu-Xia Deng
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Baylor College of Medicine Human Genome
Sequencing Center
Center code: BCM-HGSC
Web site: http://www.hgsc.bcm.tmc.edu/cdna/
Contact: amg@bcm.tmc.edu
Gunaratne, P.H., Garcia, A.M., Lu, X., Hulyk, S.W., Loulsege
Kowis, C.R., Sneed, A.J., Martin, R.G., Muzny, D.M., Nanavat
A.N., Gibbs, R.A.
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323. .799
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Unclassified.

1 (bases 1 to 417)

Bayne, M.L. and Thomas, K.A. Jr.
Vascular endothelial cell growth factor C.

L. Patent: US 6569434-A 36 27-MAY-2003;

L. Cocation/Qualifiers

1. .417

/organism="unknown"
/mol_type="genomic DNA"
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Pred. No. 4.3e-113;
0; Mismatches 0;
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US 6569434
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Sequence 36
AR338152
AR338152.1
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Best Local S
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/note="PDGF; Region: Platelet-derived endothelial growth factors (PDGF, VEGI/db xref="CDD:smart00141"
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                                              Score 419.4; DB 10;
Pred. No. 1.1e-114;
); Mismatches 36;
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I (bases 1 to 417)

Bayne, M.L. and Thomas, K.A. Jr.

Vascular endothelial cell growth factor

Patent: US 6140073-A 36 31-OCT-2000;

Location/Qualifiers
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US 6140073
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Best Local Similarity 100.0%;
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1 Similarity 92.5%;
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Location/Qualifiers
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les 118;
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Bayne, M.L. and Thomas, K.A. Jr.

Vascular endothelial cell growth factor

Patent: US 6140073-A 44 31-OCT-2000;

Location/Qualifiers

1. .513
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Bayne, M.L. and Thomas, K.A. Jr.
Vascular endothelial cell growth factor
Patent: US 6569434-A 44 27-MAY-2003;
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/mol_type="unassigned DNA"
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US 6140073
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ilarity 71.6%;
Conservative
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Best Local Similarity
Matches 336; Conser
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Seguence 44
AR117114
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Sequence 44
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AR338157
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AR117114
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Homo sapiens placental growth factor, vascular endothelial growth factor.related protein mRNA, complete cds.
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2 (bases 1 to 513)

Kalnine, N., Chen, X., Rolfs, A., Halleck, A., Hines, L., Eisenstein, S.,
Koundinya, M., Raphael, J., Moreira, D., Kelley, T., LaBaer, J., Lin, Y.,
Phelan, M. and Farmer, A.
Direct Submission
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This CDS clone is a part of a collection of human full length expression clones generated by BD Biosciences Clontech and the Harvard Institute of Proteomics. Each CDS has been cloned in two forms: with and without stop-codon (to allow fusion with C-termin
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y, T., LaBaer, J., Lin,
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                                                                                                                                                                                                                                                                                                      -CAGGGGCCCTGTCTGCTGGAACAACTCAACAGAAATGGAAGTG
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Kalnine, N., Chen, X., Rolfs, A., Halleck, A., Hines, L., Eisen Koundinya, M., Raphael, J., Moreira, D., Kelley, T., LaBaer, J. Phelan, M. and Farmer, A.
Cloning of human full-length CDSs in BD Creator (TM) System
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                                                                                                      Length
                                                                                                                                                   Indels
                                                                                               Score 230.2; DB 6;
Pred. No. 7.4e-58;
; Mismatches 118;
/organism="unknown"
/mol_type="genomic DNA"
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                                                                                                Query Match
Best Local Similarity 71.6%;
Matches 336; Conservative
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C-terminal

sednences

construct

synthetic o artificial

ORGANISM

SOURCE

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-10-071-370a-3

synthetic construct

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/translation="MPVMRLFPCFLQLLAGLALPAVPPQQWALSAGNGSSEVEVVPFQEVWGRSYCRALERLVDVVSEYPSEVEHMFSPSCVSLLRCTGCCGDENLHCVPVETANVTMQLLXIRSGDRPSYVELTFSQHVRCECRPLREKMKPERRRPKGRGKRRREKQRPTDCHLCGDAVPRR"
              e pDNR-DUAL
Sall site
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 Fusion (TM)
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     cloning system between the Sall and HindIII sites of the vector. Additional sequences in the clone: 'ACC' after Sand before 'ATG' to provide Kozak consensus sequence; 'GG last codon and before HindIII site to maintain reading fractione distribution: http://bioinfo.clontech.com/orfclones
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 directionally cloned
                                                                                                                                                                                                                                                                    factor,
                                                                                                                                                                            /clone_lib="BD Creator(TM) CDS Lil
collection"
/lab_host="DH5alpha T1 resistant"
/note="Vector: pDNR-Dual"
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 230.2; DB 9;
Pred. No. 7.4e-58;
); Mismatches 118;
                                                                                                                                                                                                                                                             growth factor-related protein"
/protein_id="AAP35846.1"
/db_xref="GI:30583203"
/translation
                                                                                                                     organism="Homo sapiens"
                                                                                                                                /mol_type="mRNA"
/db_xref="taxon:9606
/clone="GH00781X1.0"
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                                                                                                                                                                                                                                                       start=1
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ilarity 71.6%;
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Matches
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Kalnine, N., Chen, X., Rolfs, A., Halleck, A., Hines, L., Eisenstein, S., Koundinya, M., Raphael, J., Moreira, D., Kelley, T., LaBaer, J., Lin, Y., Roundinya, M., Raphael, J., Moreira, D., Kelley, T., LaBaer, J., Lin, Y., Phelan, M. and Farmer, A.

Direct Submission

Direct Submission

Submitted (13-MAY-2003) BD Biosciences Clontech, 1020 East Meadow Circle, Palo Alto, CA 94303, USA

This CDS clone is a part of a collection of human full length expression clones generated by BD Biosciences Clontech and the Harvard Institute of Proteomics. Each CDS has been cloned in two forms: with and without stop-codon (to allow fusion with C-terminal tag). The CDS has been directionally cloned using BD In-Fusion(TM) cloning system between the Sall and HindIII sites of the pDNR-DUAL vector. Additional sequences in the clone: 'ACC' after Sall site and before 'ATG' to provide Kozak consensus sequence; 'GG' after last codon and before HindIII site to maintain reading frame.

Clone distribution: http://bioinfo.clontech.com/orfclones.
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/transl_table=11
/transl_table=11
/product="Homo sapiens placental growth factor, vascular
endothelial growth factor-related protein"
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EVWGRSYCRALERLVDVVSEYPSEVEHMFSPSCVSLLRCTGCCGDENLHCVPVETANV
TMQLLKIRSGDRPSYVELTFSQHVRCECRPLREKMKPERRRPKGRGKRRREKQRPTDC
HLCGDAVPRRL"
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1 (bases 1 to 513)
Kalnine, N., Chen, X., Rolfs, A., Halleck, A., Hines, L., Eisenstein, S
Koundinya, M., Raphael, J., Moreira, D., Kelley, T., LaBaer, J., Lin, Y
Phelan, M. and Farmer, A.
Cloning of human full-length CDSs in BD Creator (TM) System Donor
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Pred. No. 7.4e-58;
0; Mismatches 118;
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'note="Vector: pDNR-Dual"
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note="Mutations: 512:Stop->Leu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="synthetic construct"
/mol_type="mRNA"
/db_xref="taxon:32630"
/clone="GH00781L1.0"
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ilarity 71.6%;
Conservative
                                                                                                                                                                                                                                                                                                             to 513)
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                                                                                                                                                                                                                                                                       Unpublished
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13-MAY-2003, vascular

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linear SYN L l growth factor, mRNA, partial c

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GI:30585384

ACCESSION VERSION KEYWORDS

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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1744)

S Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Schamen, C.R., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuk, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunarathe, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Tourchman, J.W., Green, B.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
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Homo sapiens placental growth factor, vascular endothelial growth factor-related protein, mRNA (cDNA clone MGC:14095 IMAGE:3629125),
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Strausberg, R.
Direct Submission
Submitted (11-MAY-2001) National Institutes of Health, Mammalian Submitted (11-MAY-2001) Cancer Gene Collection (MGC), Cancer Genomics Office, National Cancer Gene Collection (MGC), Cancer Gene IIA03, Bethesda, MD 20892-2590,
           GTACCCTTCCAGGAAGTGTGGGGCCGCAGCTACTGCCGGGCGCCTGGAGAGGCTGGTGGAC
                                                                        ATTGCAGATGAACACCCTAATGAAGTGTCTCATATATTCAGTCCGTCATGTGTCCTTCTG
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On Aug 20, 2003 this sequence version replaced gi:14043630
Contact: MGC help desk
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Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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Tissue Procurement: ATCC
cDNA Library Preparation: Rubin Laboratory
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/protein_id="AAB30462.2"
/db_xref="GI:7717236"
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TMQLLKIRSGDRPSYVELTFSQHVRCECRPLREKMKPERRRFKGRGKRRRENQRPTDC
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Catarrhini; Hominidae; Ho
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                                                                 AACATCACTATGCAGATCTTAAAGATTCCCCCCAATCGGGATCCACATTCCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ink staff at the National Library of Medicine cree (NCBI gibbsq 154805) from the original journal sequence comes from Fig. 2.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PlGF-2) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A heparin-binding form of placenta growth factor (Plexpressed in human umbilical vein endothelial cells Growth Factors 9 (4), 259-268 (1993) 94198032 8148155 GenBank staff at the National Library of Medicine cr
                                                                                                                                                                                                                                                                                                                                              GAAAGGAGGAAAACCAAGGGGAAGAAAGCAAAAGCAAAAACCCCACAGA
                                                                                                                                                                                                                                                                                                                                                                                                Length
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translation differs from conceptual
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les 118;
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Pred. No. 7.4e
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growth factor
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/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mol_type="mRNA"
db_xref="taxon:9606"
cell_type="endothelial"
tissue_type="placenta_ur
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product="plac
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Homo sapiens placenta
S72960
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ilarity 71.6%;
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DNA Sequencing by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Blakesley,R.W., Guffard,G.G., Breen,K., Haghighi,P.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="LocusID:5228"
/translation="MPVMRLFPCFLQLLAGLALPAVPPQQWALSAGNGSSEVEVVPFQ
EVWGRSYCRALERLVDVVSEYPSEVEHMFSPSCVSLLRCTGCCGDENLHCVPVETANV
TMQLLKIRSGDRPSYVELTFSQHVRCECRPLREKMKPERRFPKGRGKRRREKQRPTDC
HLCGDAVPRR"
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                                                                                                                                                                                                                                                                                                                                      Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAL Plate: 20 Row: a Column: 15
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 201495.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    endothelial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGCTGGCCATGAAGCTGTTCACTTGCTTGCAGGTCCTAGCTGGGTTGGCTGTGCAC
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endothelial growth factors (PDGF, VEGF) family"
/db_xref="CDD:smart00141"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product="placental growth factor, vascular
growth factor-related protein"
/protein_id="AAH07789.1"
/db_xref="GI:14043631"
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nes 118;
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clone="MGC:14095 IMAGE:3629125"

tissue type="Placenta, chorioca:

clone lib="NIH MGC_21"

lab host="DH10B-R"

note="Vector: pOTB7"
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No. 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            db_xref="LocusID:5228"
db_xref="MIM:601121"
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Pred.
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illarity 71.6%;
Conservative
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E trausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                           BC001422
Homo sapiens placental growth factor, vascular endothelial growth
factor-related protein, mRNA (cDNA clone MGC:1683 IMAGE:3139175),
                                                                                                                                                                          408
                                                                          348
                                                                                                                           681
                                                                                                                                                                                                                       741
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Catarrhini; Hominidae; Homo.
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Strausberg, R.
Direct Submission
Submitted (12-DEC-2000) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Gene Collection (MGC), Cancer Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                      AACATCACTATGCAGATCTTAAAGATTCCCCCCAATCGGGATCCACATTCCTACGTGGAG
                                                                                                      AATGTCACCATGCAGCTCCTAAAGAT---CCGTTCTGGGGACCGGCCCTCCTACGTGGAG
CTGCGCTGCACCGGCTGCGCGGTGAGAATCTGCACTGTGTGCCGGTGGAGACGGCC
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On Aug 19, 2003 this sequence version replaced gi:12802997
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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ele,K., Beckstrom-Sternberg,S.M., Benjamin,B
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Proc. Natl. Acad. Sci. U.S.A.
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Primates;
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Mammalia; E
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MEDLINE
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TITLE
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VERSION
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AUTHORS
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BC001422
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Akhter, N., Ayele, K.,

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Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAL Plate: 4 Row: m Column: 6
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 20149542.
Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S., Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P., Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Laric, P., Legaspi, R., Maduro, Q.L., Masiello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C., McDowell, J., Pearson, R., Stantripop, S., Thomas, P.J., Touchman, J.W., Tsurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L., Young, A., Zhang, L.-H. and Green, E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="MPVMRLFPCFLQLLAGLALPAVPPQQWALSAGNGSSEVEVVPFQ
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/note="PDGF; Region: Platelet-derived and vason
endothelial growth factors (PDGF, VEGF) family
/db_xref="CDD:smart00141"
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/wol_type="mRNA"
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/clone="MGC:1683 IMAGE:3139175"
/tissue_type="Placenta, choriocarcinoma"
/clone_lib="NIH MGC_21"
/lab_host="DH10B-R"
/note="Vector: pOTB7"
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/product="placental growth factor,
growth factor-related protein"
/protein_id="AAH01422.1"
/db_xref="GI:12802998"
/db_xref="LocusID:5228"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 230.2; DB 9;
Pred. No. 7.7e-58;
0; Mismatches 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PlGF-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="synonyms: PLGF, P]
/db_xref="LocusID:5228"
/db_xref="MIM:601121"
347. .859
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Best Local Similarity 71.6%;
Matches 336; Conservative
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## SUMMARIES

Description	28956 Sequenc	0	15 Rat		Aag28952 Sequence	23040	5538	Aav25536 Vascular	Aaf81273 cDNA enco	Aaf81272 Rat VEGF	2374	Aca62371 cDNA enco	Aag28955 Seguence	39829	c83514	559	Aaq23041 Encodes V	2553	127	Aca62375 cDNA enco	Aca62372 cDNA enco	Aav25539 Vascular	Aaz39801 Vascular
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The full length coding region of the B subunit or monomer of VEGF is determined from four sets of overlapping cDNA clones. Degenerate oligo. primers based on the amino acid sequences from polypeptide L50 are used to PCR amplify the central region of the cDNA for VEGF AB, B monomer. A

and

Vascular endothelial cell growth factor sub-units - which stimulate vascular endothelial cell growth, used for inducing tissue repair a

P-PSDB; AAR27357.

Disclosure, Fig 8; 61pp; English.

growth.

83519 Hum	90	) Aaa91000 Human PI	8 Aaq28948 Sequence		s Aac83516 Rat VEGF	2 Ada25602 Rat cDNA	Aaa90999 Hum	1287	Abz3547	Abv94112 Breas	Abk84573		1 Add08951 Human PIG		0 Human	8 Ada25608 Rat cDNA	0 Abl50280 Chimeric	8 Aag24268 Encodes	1 Abl50281 Human PI	14601 Human	o Thiman Discosor Hilman Discosor Hilman Discosor
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### ALIGNMENTS

VEGF growth factor Vascular development; mitogen; blood vessel; vascular endothelial growth factor; neovascularisation; endothelial cell Location/Qualifiers 1. .477 /\*tag= a BP 91US-00676436. 92EP-00302750 477 Sequence encoding vascular amino acid residue subunit. (revised)
(first entry) AAQ28956 standard; cDNA; (MERI ) MERCK & CO INC. Thomas KA; WPI; 1992-325745/40. 28-MAR-1991; 27-MAR-1992; 30-SEP-1992. EP506477-A1 25-MAR-2003 25-FEB-1993 Bayne ML, AAQ28956; Rattus RESULT 1 Key 

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single band migrating at 108 bp was gel purified, digested with Sall, ligated into pGEM3Zf(+) and sequenced. The nucleotide sequence obtained (pYG) was used to design antisense and sense PCR primers to amplify the 5, and 3' ends of the cDNA. These 5' and 3' clones are denoted p5V2 and p3V2 respectively. The entire base sequence for the 158 amino acid microheterogeneous B subunit and the 138 amino acid microheterogeneous E subunit are shown in AAQ28955 and AAQ28956. (Updated on 25-MAR-2003 to correct PN field.)
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                                     division;
                                                                                                                                                                                                                                                                                                 The present invention is concerned with the human vascular endot growth factor (VEGF) C subunit. VEGF is a vascular endothelial c mitogen and can be used to promote vascular development and repasubunit may exist as a homodimer or a heterodimer with the VEGF subunit. VEGF can be used in the treatment of wounds of mammals, artificial blood vessels with vascular endothelial cells, in the production of artificial blood vessels and to induce tissue repa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAGTGTGGGGCCGCAGCTACTGCCGGCCAATGGAGAAGCTGGTGTACATTGCA(
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93US-00124259
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P-PSDB; ADA25601.
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20-SEP-1993;
16-JAN-1996;
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P-PSDB; AAR27353.
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Gly Asn Xaa Ser Thr Glu Met Glu Val Val Pro Phe Asn Glu Val plus a nearly equal amount of a truncated form of the same sequence missing the first three residues. The missing X residue corresp. to an Asn in the cloned sequence. The A and sum of the B chain peptides were recovered in nearly equal amonunts supporting the interpretation that the two peptides combine to form an AB heterodimer in VEGF II. The form of VEGF AB mature A subunit in the heterodimer is the 164 amino acid form. The form derived from the 158 full length amino acid form. (Updated on 25-MAR-2003 to correct PN field.) (Updated on 25-MAR-2003 to correct PN field.)
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Pred. No. 1.2e-132;
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                                                                                                                                                                                                                                  The B-subunit of VEGF-II occurs in two forms; the mature protein has either 135 or 115 amino acids. The two forms are generated by alternative splicing of the mRNA transcript prior to translation. The full-length coding region of the B monomer was determined from four sets of overlapping cDNA clones. PCR primers were designed based on the amino acid sequence of a Leu C peptide (L50) and used to amplify the central region of the cDNA. A single band migrating at 108bp was gel purified, digested with Sall, ligated into pGEM3Zf(+) and sequenced. The nucleotide sequence obtained was used to design antisense and sense PCR primers to amplify the 5' and 3' ends of the cDNA and complete the full-length sequence. See also AAQ23038 and AAQ23041-Q23059
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Pred. No. 1.2e-132;
0; Mismatches 1;
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21-SEP-1990;
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growth; artificial blood vessel; ss.
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05-JAN-1993;
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CAGATCTTAAAGATTCCCCCAATCGGGATCCACATTCCTACGTGGAGATGA
          CAGATCTTAAAGATTCCCCCCAATCGGGATCCACATTCCTACGTGGAGATGA
                                        CAGGATGTACTCTGCGAATGCAGGCCTATTCTGGAGACGACAAAGGCAGAAA
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Pred. No. 1.2e-132;
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                                                                                                                                                                                                                                                    477
TCCCAGGGGGCCCTGTCTGCTGGGAACAACTCAACAGAAATGGAAGTGGTGCCTTTCAAT
                                                                                                                                                                                                                                                                                                                                                                          Rat; vascular endothelial growth factor II; VEGF-II; wound healing; vascular repair; neovascularisation; tissue repair; VEGF II B subunit;
                                                                                                                                                    Stimulating angiogenesis or wound healing through vascular repair, neovascularization or both, comprises administering mammalian vascular endothelial growth factor II comprising two different subunits.
                                     GGCTGCTGTGTGACGAGGGTCTGCACTGTGTGGCGCTAAAGACAGCCAACATCACTATG
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P-PSDB; AAB73964.
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                                                                             healing through vascular repair, neovascularisation or both. The method comprises administering to a patient a pharmaceutically effective amount of mammalian vascular endothelial growth factor II (VEGF-II) comprising the heterodimer of subunits A and B, or a homodimer of B subunits. VEGF-II is useful for vascular development and repair, promotion of tissue repair, and the production of artificial vessels. The present sequence encodes
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CAGGATGTACTCTGCGAATGCAGGCCTATTCTGGAGACGACAAAGGCAGAAAGGAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 comprising A
                                                                                               Rat; vascular endothelial growth factor II; VEGF II; mitogenesis; mammalian; vascular endothelial cell growth; tissue repair; vascular development; vascular repair; blood vessel growth; neovascularisation; artificial blood vessel; polymeric vessel; vu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   subunit cleavage product #2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New heterodimeric vascular endothelial growth factor II compri
B subunits encoded by different genes, useful for preparing a
for promoting vascular or tissue repair or neovascularization.
                                                                                                                                                                                                                                                                                subunit cleavage product #2
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93US-00000834.
94US-00299185.
98US-00038199.
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-PSDB; ABU62003.
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05-JAN-1993;
31-AUG-1994;
10-MAR-1998;
07-JUN-1999;
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Other;
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neovascularisation;
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             Score 475.4; DB 7;
Pred. No. 1.2e-132;
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 G; 105
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             99.7%;
ilarity 99.8%;
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(first entry)
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476; Conser
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                                                                                                 determined from four sets of overlapping cDNA clones. Degenerate oligo. primers based on the amino acid sequences from polypeptide L50 are used to PCR amplify the central region of the cDNA for VEGF AB,B monomer. A single band migrating at 108 bp was gel purified, digested with Sall, ligated into pGEM3Zf(+) and sequenced. The nucleotide sequence obtained (pVG) was used to design antisense and sense PCR primers to amplify the 5, and 3, ends of the cDNA. These 5, and 3, clones are denoted p5V2 and p3V2 respectively. The entire base sequence for the 158 amino acid microheterogeneous B subunit and the 138 amino acid microheterogeneous B subunit and the 138 amino acid microheterogeneous become in AAQ28955 and AAQ28956. (Updated on 25-MAR-2003 to correct PD field.)
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                                                                                                                                                                                                                                                     Length 417;
                            which stissue
                                                                                            subunit or monomer
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                            sub-units -
for inducing
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Mismatches 0;
                                                                                                                                                                                                                                 A; 100 C; 116 G; 103 T; 0 U;
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100.0%; Pr
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WPI; 1992-325745/40
P-PSDB; AAR27356.
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                                                                        Disclosure;
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This is the nucleotide sequence of a 138 amino acid residue B subunit of vascular endothelial cell growth factor (VEGF). The invention relates to a purified and isolated VEGF C subunit amino acid sequence AAY57025. VEGF exists in various microheterogenous forms, and is useful for the promotion of vascular development and repair. The invention also relates to human VEGF heterodimers AC or BC and homodimer CC, where A, B and C are subunit amino acid sequences. The VEGF AC, BC or CC amino acid sequences can be used in a tissue repairing pharmaceutical composition. The novel growth factors are useful for the production or coverage of artificial blood vessels with vascular endothelial cell. They are also useful for the induction of tissue growth and repair
                                                                                                                                                                                                                               subunit
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Pred. No. 3.4e-114
0; Mismatches 0;
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tissue repair or growth.
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    1. .417
/*tag= a
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/note= "138 amino acid
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                                                                                                                                                                                                                           and isolated induction of t
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P-PSDB; AAY57031.
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les 414; Conser
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The present invention is concerned with the human vascular endothelial growth factor (VEGF) C subunit. VEGF is a vascular endothelial cell mitogen and can be used to promote vascular development and repair. The subunit may exist as a homodimer or a heterodimer with the VEGF A or B subunit. VEGF can be used in the treatment of wounds of mammals, to covartificial blood vessels with vascular endothelial cells, in the production of artificial blood vessels and to induce tissue repair or
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                                                                                                                                                                                                                                                                                                                                                               Human vascular endothelial cell growth factor (VEGF) C subunit DNA protein, useful for promoting vascular development and repair, and promoting tissue repair, especially for treating wounds in mammals.
                                                                                                           division;
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                                                                                                        Vascular endothelial growth factor; VEGF C subunit; cell d
artificial blood vessel; tissue growth; tissue repair; ss.
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                                                                                   sequence SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                7; 58pp; English
             ВР
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93US-00124259
                                                            entry)
                                                                                Rat VEGF subunit B coding
                                                                                                                                                                                                                                                                               & CO INC
                                                                                                                                                                                                                                                                                                       Bayne ML;
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P-PSDB; AAB37507.
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6654154 hits satisfying chosen parameters length: 0 length: 2000000000 οĘ sed sed Total number DB DB Maximum Minimum

Minimum Match 0% Maximum Match 100% Listing first 45 summaries Post-processing:

Published Applications NA:\*

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(cgn2\_6/ptodata/1/pubpna/US10A\_PUB.Seq:\* Published Database

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# SUMMARIES

		Description	Sequence 3 Appli	Sequence 5. Appli	114	11	27.		590	35.	Sequence 11. April	12,	1813	7 6	14.	Sequence 93, Appl
		ID	US-10-071-370A-3	10-01	US-09-795-006A-114	US-10-211-462-114	US-10-262-538-27	1	US-10-101-510-590	021-660-	US-10-343-825A-11	US-10-343-825A-12	- 1	- 1	10-343-	-35
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# ALIGNMENTS

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Sequence 3, Application US/10071370A; Sequence 3, Application US/10071370A; Publication No. US20030045471A1
GENERAL INFORMATION:
    APPLICANT: Bayne, Marvin L.
    APPLICANT: Conn, Gregory L.
    APPLICANT: Thomas, Jr., Kenneth A.
    TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
    FILE REFERENCE: 18199CB
    CURRENT APPLICATION NUMBER: 09/326,879
    PRIOR FILING DATE: 1998-03-10
    PRIOR APPLICATION NUMBER: 08/299,185
    PRIOR APPLICATION NUMBER: 08/299,185
    PRIOR APPLICATION NUMBER: 08/00,834
    PRIOR FILING DATE: 1993-01-05
    PRIOR FILING DATE: 1990-09-21
    NUMBER OF SEQ ID NOS: 29
    NUMBER OF SEQ ID NOS: 29
    NUMBER: FastSEQ for Windows Version 4.0
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LENGTH: 477
TYPE: DNA
ORGANISM: rat
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RESULT 3
US-09-795-006A-114

i Sequence 114, Application US/09795006A

j Patent No. US20020151680A1

j GENERAL INFORMATION:

j TITLE OF INVENTION: MATERIALS AND METHODS INVOLVING HYBRID VASCULAR

j TITLE OF INVENTION: ENDOTHELIAL GROWTH FACTOR DNAS AND PROTEINS

j TITLE OF INVENTION: ENDOTHELIAL GROWTH FACTOR DNAS AND PROTEINS

j TITLE OF INVENTION NUMBER: US/09/795,006A

CURRENT APPLICATION NUMBER: US 60/205,331

PRIOR FILING DATE: 2000-05-18

PRIOR FILING DATE: 2000-05-25

NUMBER OF SEQ ID NOS: 175

SOFTWARE: PatentIn Ver. 2.0
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; LOCATION: (322)..(768)
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APPLICANT: Conn, Gregory L.
APPLICANT: Thomas, Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
TITLE OF INVENTION: II
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Mismatches 0;
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CURRENT APPLICATION NUMBER: US/10/071,370A
CURRENT FILING DATE: 2002-02-08
PRIOR APPLICATION NUMBER: 09/326,879
PRIOR FILING DATE: 1999-06-07
PRIOR FILING DATE: 1998-03-10
PRIOR FILING DATE: 1994-08-31
PRIOR FILING DATE: 1994-08-31
PRIOR FILING DATE: 1994-08-31
PRIOR FILING DATE: 1993-01-05
PRIOR FILING DATE: 1993-01-05
PRIOR FILING DATE: 1990-09-21
NUMBER OF SEQ ID NOS: 29
SOFTWARE: FASTSEQ for Windows Version 4.0
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LOCATION: (1).
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APPLICANT: Glynne, Richard
APPLICANT: Watson, Susan R.
APPLICANT: Aziz, Natasha
APPLICANT: Eos Biotechnology, Inc.
TITLE OF INVENTION: Methods of Diagnosis of Angiogenesis Modulator TITLE OF INVENTION: Methods of Screening for Angiogenesis Modulator FILE REFERENCE: 018501-006200US
CURRENT APPLICATION NUMBER: US/10/211,462
CURRENT FILING DATE: 2003-02-13
PRIOR FILING DATE: 2001-02-14
PRIOR FILING DATE: 2001-02-14
PRIOR APPLICATION NUMBER: US 09/791,390
         AACATCACTATGCAGATCTTAAAGATTCCCCCCAATCGGGATCCACATTCCTACG
                                                                                                    ATGACATTCTCTCAGGATGTACTCTGCGAATGCAGGCCTATTCTGGAGACGACAA
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Pred. No. 1.1e-63;
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5. US20040033495A1
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PRIOR APPLICATION NUMBER: US 6
PRIOR FILING DATE: 2001-11-29
NUMBER OF SEQ ID NOS: 230
SOFTWARE: Patentin Ver. 2.1
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Best Local Similarity 68.3%;
Matches 332; Conservative
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Publication No. US20
GENERAL INFORMATION:
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CURRENT APPLICATION NUMBER: US/10/262,538
CURRENT FILING DATE: 2002-09-30
NUMBER OF SEQ ID NOS: 33
SOFTWARE: Patentin version 3.0
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Pred. No. 1.3
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ORGANISM: Homo sapiens
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                                                                                                      Sequence 590, Application US/10101510

Bublication No. US20030148295A1

GENERAL INFORMATION:

APPLICANT: WANG, YIXIN

TITLE OF INVENTION: EXPRESSION PROFILES AND
FILE REFERENCE: 15117.0012

CURRENT APPLICATION NUMBER: US/10/101,510

CURRENT FILING DATE: 2002-03-20

PRIOR FILING DATE: 2001-03-20

NUMBER OF SEQ ID NOS: 805

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 590

LENGTH: 1645
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Pred. No. 1.1e-63;
); Mismatches 139;
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                                                                                                                                  Application US/10007926A . US20030143539A1
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                                                                                                                                                                                                     CANT: NGUYEN, CATHERINE
CANT: VIENS, PATRICE
CANT: FERT, VINCENT
OF INVENTION: GENE EXPRESSION
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CURRENT APPLICATION NUMBER: US/10/343,825A CURRENT FILING DATE: 2003-09-09 PRIOR APPLICATION NUMBER: PCT/JP01/06856 PRIOR FILING DATE: 2001-08-09

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NUMBER OF SEQ ID NOS: 15 SOFTWARE: Patentin version SEQ ID NO 11 LENGTH: 468

TYPE: DNA ORGANISM: Artificial

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publication No. US20030152926A1

GENERAL INFORMATION:
    APPLICANT: Murray, Richard
    APPLICANT: Glynne, Richard
    APPLICANT: Watson, Susan R.
    APPLICANT: EOS Biotechnology, Inc.
    TITLE OF INVENTION: No. US20030152926A1el Methods of Scree;
    TITLE OF INVENTION: Modulators
    TITLE OF INVENTION: Modulators
    FILE REFERENCE: 018501-000710US
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Pred. No. 1.1e-63
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CURRENT FILING DATE: 2001-12-06
PRIOR APPLICATION NUMBER: US/09/784,356
PRIOR FILING DATE: 2001-02-14
PRIOR APPLICATION NUMBER: US 09/637,977
PRIOR FILING DATE: 2000-08-11
NUMBER OF SEQ ID NOS: 135
SOFTWARE: FastSEQ for Windows Version 3.0
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LENGTH: 1645
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Best Local S
Matches 332
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                                             13;
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                                         Score 213.2; DB 1
Pred. No. 8.2e-64;
); Mismatches 103
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FILE REFERENCE: P23303
CURRENT APPLICATION NUMBER: US/10/343,825A
CURRENT FILING DATE: 2003-09-09
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PRIOR FILING DATE: 2001-08-09
NUMBER OF SEO ID NOS: 15
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TITLE OF INVENTION: Chimeric Human-Type
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SOFTWARE: PatentIn version 3.2
                                            ch 44.7%;
il Similarity 72.4%;
310; Conservative
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ORGANISM: Artificial
FEATURE:
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US-10-343-825A-12
; OTHER INFORMATION:
US-10-343-825A-11
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LENGTH: 450
                                             Query Match
Best Local S
Matches 310
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Growth Factor

Sequence 11, Application US/10343825A
Publication No. US20040038341A1
GENERAL INFORMATION:
APPLICANT: SHIBUYA, Masabumi
TITLE OF INVENTION: Chimeric Human-Type Vascular Endothelial Cell FILE REFERENCE: P23303

-10-343-825A-11

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DB 13;
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Score 187.6; DB 13
Pred. No. 7.6e-55;
0; Mismatches 119;
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Pred. No. 4.2e-48;
); Mismatches 131
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LIBRARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/918,995
CURRENT FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: US/09/235,076
PRIOR FILING DATE: 1999-01-20
NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 1813
LENGTH: 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1813, Application US/09918995
Publication No. US20030073623A1
GENERAL INFORMATION:
APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: FROM VARIOUS CDNA
FILE REFERENCE: 20411-756
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Conservative
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Sequence 13, Application US/10343825A
Sequence 13, Application US/10343825A
GENERAL INFORMATION:
APPLICANT: SHIBUYA, Masabumi
TITLE OF INVENTION: Chimeric Human-Type Vascular Endothelial Cell Growth Factor
FILE REFERENCE: P23303
CURRENT APPLICATION NUMBER: US/10/343,825A
CURRENT FILING DATE: 2003-09-09
PRIOR APPLICATION NUMBER: PCT/JP01/06856
PRIOR FILING DATE: 2001-08-09
NUMBER OF SEQ ID NOS: 15
SOFTWARE: Patentin version 3.2
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APPLICANT: Kessler, Paul
TITLE OF INVENTION: VEGF FUSION PROTEINS
FILE REFERENCE: 205654
CURRENT APPLICATION NUMBER: US/09/832,355A
CURRENT FILING DATE: 2001-04-10
NUMBER OF SEQ ID NOS: 126
SOFTWARE: PatentIn version 3.0
                                                                                                                APPLICANT: SHIBUYA, Masabumi
TITLE OF INVENTION: Chimeric Human-Type Var
FILE REFERENCE: P23303
CURRENT APPLICATION NUMBER: US/10/343,825A
CURRENT FILING DATE: 2003-09-09
PRIOR APPLICATION NUMBER: PCT/JP01/06856
PRIOR FILING DATE: 2001-08-09
NUMBER OF SEQ ID NOS: 15
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; Sequence 93, Application US/09832355A
; Publication No. US20030027751A1
; GENERAL INFORMATION:
; APPLICANT: Kovesdi, Imre
; APPLICANT: Kessler, Paul
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No. US20040038341A1
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APPLICANT: Reich, Samuel Jotham
TITLE OF INVENTION: Compositions and Methods for sil
TITLE OF INVENTION: Inhibition of Angiogenesis
FILE REFERENCE: 43826-1
CURRENT APPLICATION NUMBER: US/10/294,228
CURRENT FILING DATE: 2002-11-14
PRIOR FILING DATE: 2002-07-24
NUMBER OF SEQ ID NOS: 80
SOFTWARE: FastSEQ for Windows Version 4.0
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Pred. No. 3.9e-27;
); Mismatches 132;
                                                -27;
150;
109; DB 10
No. 4.2e-27
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  Score
Pred.
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Publication No. US20040018176A1
GENERAL INFORMATION:
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Search completed: September 16, 2004, 22:22:40 Job time : 350 secs

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model S using protein search, OM protein

Second September 13, 2004, 09:33:13 Run on:

es/sec (without alignments) 346.066 Million cell

US-10-071-370A-4 846

score: Title: Perfect

. RKTKGKRKQSKTPQTEEPHL 1 MLAMKLFICFLQVLAGLAVH. Sequence:

158

BLOSUM62 Gapop 10.0 , table: Scoring

0.5 Gapext residues 1586107 segs, 282547505 Searched:

1586107 of hits satisfying chosen parameters Total number

2000000000 seq length: seq length: DB DB Minimum Maximum

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

A\_Geneseq\_29Jan04:\*
1: geneseqp1980s:\*
2: geneseqp1990s:\*
3: geneseqp2000s:\*
5: geneseqp2001s:\*
6: geneseqp2003as:\*
7: geneseqp2003bs:\* 

inted, No. is the number of results predicted by chance to have greater than or equal to the score of the result being proderived by analysis of the total score distribution. Pred. No score gand is

## SUMMARIES

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#### ALIGNMENTS

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growth factor VEGF AB
                                                  development; mitogen; blood vessel; endothelial growth factor; neovascularisation.
                                                                                      /label= glycosylation site
                                        endothelial cell
                                                                           Location/Qualifiers
    158
    standard; protein;
                         (revised)
(first entry)
                                        vascular
                                                                            Key
Modified-site
                                                                  Homo sapiens.
                                        of
                         25-MAR-2003
25-FEB-1993
7353
AAR27353
               AAR27353;
                                         Sequence
                                                  Vascular
                                                       vascular
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subunit

92EP-00302750 27-MAR-1992; EP506477-A1 30-SEP-1992

91US-00676436. (MERI ) MERCK & CO INC. Thomas KA; 28-MAR-1991; Bayne ML,

1992-325745/40.

WPI

N-PSDB; AAQ28952

which stimulate tissue repair and cell growth factor sub-units - cell growth, used for inducing Vascular endothelial vascular endothelial growth.

Example; Fig 3; 61pp; English

GS-9L cells were cultured and the VEGF AB subunits were isolated and sequenced. The reduced and carboxymethylated protein eluted as two peaks at approx. 23 and 25 ml that were of approx. equal area as determined by monitoring absorbance at 210 nm. Samples of the two protien subuntits isolated after reduction and carboxymethylation were each applied to polybrene-coated glass fiber filters and their N-terminal sequences were determined. The peak of absorbance eluting at approx 25 ml (A subunit)

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yielded an amino terminal sequence Ala Pro Thr Glu Gly Glu Gln Lys Ala His Glu Val Val identical to VEGF AA. The peak of absorbance eluting at approx. 23 ml (B subunit) yielded the N-terminal sequence Ala Leu Ser Ala Gly Asn Xaa Ser Thr Glu Met Glu Val Val Pro Phe Asn Glu Val plus a nearly equal amount of a truncated form of the same sequence missing the first three residues. The missing X residue corresp. to an Asn in the cloned sequence. The A and sum of the B chain peptides were recovered in nearly equal amonunts supporting the interpretation that the two peptides combine to form an AB heterodimer in VEGF II. The form of VEGF AB mature A subunit in the heterodimer is the 164 amino acid form. The form derived from the 158 full length amino acid form. (Updated on 25-MAR-2003 to correct PD field.)
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                                                                                                                                                                                                                                                                                     MLAMKL FTCFLQVLAGLAVHSQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADE
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N-PSDB; AAQ28956.
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25-FEB-1993
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primers based on the amino acid sequences from polypeptide L50 are used to PCR amplify the central region of the cDNA for VEGF AB, B monomer. A single band migrating at 108 bp was gel purified, digested with Sall, ligated into pGEM3Zf(+) and sequenced. The nucleotide sequence obtained (pYG) was used to design antisense and sense PCR primers to amplify the 5' and 3' ends of the cDNA. These 5' and 3' clones are denoted p5V2 and p3V2 respectively. The entire base sequence for the 158 amino acid microheterogeneous B subunit and the 138 amino acid microheterogeneous B subunit and the 138 amino acid microheterogeneous E subunit are shown in AAQ28955 and AAQ28956. (Updated on 25-MAR-2003 to correct PD field.)
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Pred. No. 4e-86;
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growth; artificial blood vessel.
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Pred. No. 4e-86;
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93US-00000834
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| vessel.
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Pred. No. 4e-86;
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                                     The present sequence represents a rat vascular endothelial growt II (VEGF II) B subunit. The present invention describes: (1) a m VEGF II protein comprising an A subunit from AAW53639, AAW53640 AAW53641, and a B subunit from AAW53638, AAW53639 or the first 1 amino acids of AAW53638; and (2) a mammalian VEGF comprising a heterodimer or homodimer of B subunits. The growth factor is use promoting vascular development and repair and for promoting tiss
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Pred. No. 4e-86;
Mismatches
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             6; 46pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; protein;
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158; Conser
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                                                                                                                                                      158 AA;
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            Claim 1; Fig
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for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention is concerned with the human vascular endothelial growth factor (VEGF) C subunit. VEGF is a vascular endothelial cell mitogen and can be used to promote vascular development and repair. The subunit may exist as a homodimer or a heterodimer with the VEGF A or B subunit. VEGF can be used in the treatment of wounds of mammals, to conartificial blood vessels with vascular endothelial cells, in the production of artificial blood vessels and to induce tissue repair or
                                                                                                                                                                             HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFS
                                                                                                                                           HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vascular endothelial cell growth factor (VEGF) C subunit DNA.n, useful for promoting vascular development and repair, and ing tissue repair, especially for treating wounds in mammals
                                                                                                                                                                                                                                                                                                                                                                                                                       idothelial growth factor; VEGF C subunit; cell division; blood vessel; tissue growth; tissue repair.
          They are
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                                                                          Length 158;
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The novel growth factors are useful for the production or artificial blood vessels with vascular endothelial cell. useful for the induction of tissue growth and repair
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promoting tissue repair, espec
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93US-00124259
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N-PSDB; AAC83515.
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158; Conser
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20-SEP-1993;
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The invention relates to a method for stimulating angiogenesis or wound healing through vascular repair, neovascularisation or both. The method comprises administering to a patient a pharmaceutically effective amount of mammalian vascular endothelial growth factor II (VEGF-II) comprising the heterodimer of subunits A and B, or a homodimer of B subunits. VEGF-II is useful for vascular development and repair, promotion of tissue repair, and the production of artificial vessels. The present sequence is the mature 135 amino acid form of VEGF II B subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stimulating angiogenesis or wound healing through vascular repair, neovascularization or both, comprises administering mammalian vascular endothelial growth factor II comprising two different subunits.
                                                                                                                                                                                                         VEGF-II; wound healing; repair; VEGF II B subunit;
158
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                                          Score 846; DB 4
Pred. No. 4e-86;
Mismatches
                                                                                                                                                                                                        Rat; vascular endothelial growth factor II; vascular repair; neovascularisation; tissue vulnerary; angiogenesis.
                                                                                                                                                                                       B subunit mature 135 amino acid
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24. .1FP
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05-JAN-1993;
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B subunit;
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B subunits encoded by different genes, u
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05-JAN-1993;
31-AUG-1994;
10-MAR-1998;
07-JUN-1999;
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so be
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                                                                                                                                                                                                                                                                                                                                          vulnerary;
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                                             HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFS
                                                                                                                                                                                                                                                                                                         Rat; vascular endothelial growth factor II; VEGF II; mitogenesismammalian; vascular endothelial cell growth; tissue repair; vascular development; vascular repair; blood vessel growth; neovascularisation; artificial blood vessel; polymeric vessel;
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                        Indels
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No. 4e-86;
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24. .158
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93US-00000834.
94US-00299185.
98US-00038199.
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larity 100.0%;
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31-AUG-1994;
10-MAR-1998;
07-JUN-1999;
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can also be

endothelial

vascular

The present invention relates to the isolation of

growth factor II (VEGF II), and the polynucleotide sequences encoding it.

VEGF II is a heterodimer comprising A and B subunits that are encoded by different genes. VEGF II stimulates mitogenesis of mammalian vascular endothelial cells. VEGF II is useful for promoting tissue repair and for stimulating the growth of vascular endothelial cells. VEGF II can also be used for stimulating the growth of vascular endothelial cells in a patient to promote vascular development and repair, or blood vessel growth (neovascularisation). VEGF II can further be used to produce artificial blood vessels by treating synthetic polymeric vessels with VEGF II and implanting into them into a patient. After the implantation endothelial cells migrate into and grow on the artificial surface. The present sequence represents rat VEGF I A subunit cleavage product #2

AA;

Sequence 158

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used for stimulating the growth of vascular endothelial cells in a patient to promote vascular development and repair, or blood vessel growth (neovascularisation). VEGF II can further be used to produce artificial blood vessels by treating synthetic polymeric vessels with VEGF II and implanting into them into a patient. After the implantation endothelial cells migrate into and grow on the artificial surface. The present sequence represents rat VEGF II B subunit
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Pred. No.
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acid subunit
   standard; protein; 158
              VEGF B 158 amino
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           20-NOV-2003
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SULT
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Vulnerary; vascular endothelial cell growth; vascular endothelial cell growth factor; VEGF; mitogen; vascular development; vascular repair;

VEGF-C;

development; VEGF-B; VEGF-A; tissue repair; rat.

Rattus

US6569434-B1

27-MAY-2003

30-OCT-2000;

2000US-00699769

91US-00676436. 93US-00124259. 96US-00586039. 28-MAR-1991; 20-SEP-1993; 16-JAN-1996;

CO INC لاي (MERI ) MERCK

Thomas KA; MĽ,

WPI; 2003-605461/57 N-PSDB; ADA25600.

ering an a first comprises administ factor comprising cell growth cell growth desegnence. Stimulating vascular endothelial camount of a vascular endothelial cand a second C subunit amino acid

Example 10; Fig 8; 58pp; English

the Also The invention relates to stimulating vascular endothelial cell growth comprises administering to a patient an effective vascular endothelial stimulatory amount of a vascular endothelial cell growth factor (VEGF) comprising a first and a second C subunit amino acid sequence, where the first and second subunits comprise a sequence appearing as ADA25607. A disclosed as new are rat VEGF-A, -B and C subunit cDNAs and proteins.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         growth factor sub-units - which stimulate growth, used for inducing tissue repair and
tissue
ÆGF
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lucing vascular or represents a rat
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  useful in inducing
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              present sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                development; mitogen; blood vessel endothelial growth factor; neovaso
                                                                                   red. No. 4e
Mismatches
                                                                      Score 846;
Pred. No. 4
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    are
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  (a mitogen) repair. The
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development and repair.
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endothelial
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N-PSDB; AAQ28955.
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25-FEB-1993
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chromatography and reverse phase chromatography. AAQ23040 and AAQ23042-Q23059
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138; Conser
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05-JAN-1993;
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                                                                                             Gaps
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                                   Length 138;
                                                          Indels
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                               Score 740; DB 2; 1
Pred. No. 2.3e-74;
); Mismatches 0;
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30. .32
/label= N-glycosylation
97. .99
/label= N-glycosylation
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1. .23
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1 Similarity 100.0%; E
138; Conservative 0;
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21-SEP-1990;
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           Sequence
                                  Query Match
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                 Length 138;
                                               Indels
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              Score 740; DB 2; 1
Pred. No. 2.3e-74;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  factor I A subunit
                                                                                                                                                                                                                                                                                                                                            138 AA
87.5%; SC.
100.0%; PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            87.5%; Sc.
100.0%; Pi
                                                                                                                                                                                                                       138
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90US-00586638
93US-00000834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94US-00299185
                                                                                                                                                                                                                                          growth
                                                                                                                                                                                                                         QDVLCECRPILETTKAER
                                                                                                                                                                                                                                                                                                                                         AAW53645 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bayne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vascular endothelial cell
mitogenesis; blood vessel
                                                                                                                                                                                                                                                                                                                                                                                                                 entry)
                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             & CO INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  endothelial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Thomas KA,
                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-206007/18
N-PSDB; AAV25537.
                              l Similarity
138; Conser
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Gaps

. 0

Indels

Length 138;

Score 740; DB 2; Pred. No. 2.3e-74; 0; Mismatches 0;

	61 HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFS 120	61 HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFS 120	121 ODVLCECRPILETTKAER 138	121 QDVLCECRPILETTKAER 138	
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Search completed: September 13, 2004, 09:50:56 Job time: 131 secs

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GenCore version (c) 1993 - 2004
          Copyright
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sw model using protein search, OM protein

13, 2004, 09:48:49 September Run on:

es/sec 9; Search time 32 Seconds (without alignments) 254.903 Million cell updat

US-10-071-370A-4 Title:

846 score: Perfect

.. RKTKGKRKQSKTPQTEEPHL MLAMKLFTCFLQVLAGLAVH. Sequence

158

BLOSUM62 Gapop 10.0 Scoring table:

residues 2 51625971 Gapext 389414 seqs, Searched:

0

389414 satisfying chosen parameters hits oŧ number Total

DB DB Minimum

seq length: 0 seq length: 2000000000 Maximum

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

a cinted, Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being prand is derived by analysis of the total score distribution.

# SUMMARIES

		ę.			SUMMAKIES	
Result No.	Scor	Query Match	Length	DB	ID	Description
	846	100.0	15		US-08-586-039B-3	equence 39, App
2	<b>*#</b>	00.	15	4	-09-699-19-3	equence 39, App
e	ぜ	7	13	ᡢ	8-586-039	e 37, App
4	₹15	7	13	4	-09-699-60-	equence 37, App
Ŋ	01.	φ.	17	7	-08-039-297B-	equence 8, Appl
9	01.	φ.	17	m	-08-586-03	e 45, App
7	01.	φ.	17	4	-694-669-60-	equence 45, App
80	9 9	ω.	17	4	-09-431-88	equence 5, Appl
σ	98.	m	15	ᡢ	86-0	equence 41, App
10	98.	œ.	15	4	94-669-60-	equence 41, App
11	74.	φ.	14	Н	-08-469-42	equence 14, App
12	74.	è.	14	~	-08-039-2	equence 2, Appl
13	74.	9	14	7	-08-569-063C-	21, App
14	74.	9	14	m	-08-795-43	55, App
15	74.	Ġ	14	ო	-08-586-039B-	equence 47, App
16	-	Ġ	149	4	0-	7
17	74.	Ġ.	14	4	-08-706-054A-	5, Appl
18	74.	ė	14	<b>ታ</b>	-09-699-169-4	equence 47, App
19	74.	9	14	4	-09-313-29	equence 5, Appl
20	74.	ė.	14	4	-671-573B-5	54, App
21	19.	~	21	M	-08-586-03	equence 35, App
22	19.	7.	21	4	-699-169-3	, App
23	$\leftarrow$	7.	21	9	4084	. 524084
24	$\leftarrow$	۲.	1.8	4	83-2	pp
25	$\boldsymbol{\vdash}$	7.	21	4	-574-708A-	e 8, Appl
26	$\rightarrow$	7.	21	m	-586-	equence 49, App
27		7.	21	4	9-4	49, App

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Gaps

· 0

Indels

Score 846; DB 3; Pred. No. 6.5e-91; Mismatches 0;

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100.0%; illarity 100.0%; Conservative 0,

Query Match Best Local Similarity Matches 158; Conser

Length 158

Sequence 8, Appli Patent No. 5240848	Sequence 7, A	pp1	Sequence 7, Appli		equence 5, Appl	Sequence 10, Appl	equence 16, App	equence 3, Appl	equence 4, Appl	equence 17, App	, Appl	equence 2, Appl	, Appl	, Appl	$p_1$	, Appl
US-09-392-931-8 5240848-7	S-08-99	US-08-824-996-9	US-09-042-105-7	US-09-574-708A-10	US-08-465-968-5	PCT-US96-09001-10	US-09-037-983C-16	US-08-807-992B-3	g	US-09-037-983C-17	US-08-784-551C-2	US-09-392-932-2	US-09-574-708A-4	US-09-037-983C-2	US-09-428-909A-2	US-09-392-931-4
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28	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

## ALIGNMENTS

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RESULT 1
US-08-586-039B-39
; Sequence 39, Application US/08586039B
; Patent No. 6140073
; Patent No. 6140073
; GENERAL INFORMATION:
; APPLICANT: Bayne, Marvin L.
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR C
; TITLE OF INVENTION: SUBUNIT
; TITLE OF INVENTION: SUBUNIT
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Merck & Co., Inc.
; STREET: 126 E. Lincoln Avenue
                                                                                                                                       ט
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DA
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         MBER: US/08/586,039B
16-JAN-1996
                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Microsoft Word 6

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/586,039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
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CITY: Rahway
STATE: New Jersey
COUNTRY: USA
ZIP: 07065-0900
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TELEPHONE: (908)
TELEFAX: (908)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1 CLASSIFICATION:
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RESULT
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Indels
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Pred. No. 1.3e-78;
0; Mismatches 0;
                                          QDVLCECRPILETTKAERRKTKGKRKQSKTPQTEEPHL
                                                       CELL
                                                                                                                                                                               Bayne, Marvin L.
Thomas Jr., Kenneth A.
TVENTION: VASCULAR ENDOTHELIAL
TVENTION: SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                       MBER: US/08/586,039B
16-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/586,039
FILING DATE: 16-JAN-1996
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REGISTRATION NUMBER: 36,545
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (908) 594-3905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18361DA
                                                                                                              RESULT 3
US-08-586-039B-37
; Sequence 37, Application US/08586039B
; Patent No. 6140073
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                     PC-DOS/MS-DOS
                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck & Co., Inc.
STREET: 126 E. Lincoln Avenue
                                                                                                                                                                                                                                                                                 STREET: 126 E. Lincoln Avenue CITY: Rahway STATE: New Jersey COUNTRY: USA ZIP: 07065-0900 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-D SOFTWARE: Microsoft Word 6 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87.5%; Sc.
100.0%; Pr
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (908) 594-4720
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 138 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                              TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: sin
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 138; Conser
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APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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            HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPH
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No. 6.5e-91;
                                                                                                                            COUNTRY:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk

MEDIUM TYPE: TEM PC compatible

AVSTEM: PC-DOS/MS-DOS

F. Word 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/699,769
FILING DATE: 30-Oct-2000
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 08/586,039
FILING DATE: 16-JAN-1996
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18361DB
                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Merck & Co., Inc.
STREET: 126 E. Lincoln Avenue
CITY: Rahway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
                                                                                                                                                                                                                                                                                    Jr., Kenneth A
N: VASCULAR ENI
C SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2) 594-3905
594-4720
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                                                                                                                                                                                          SULT 2

1-09-699-769-39

Sequence 39, Application US/09699769

Patent No. 6569434

PENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 158 amino acids
TYPE: amino acid
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illarity 100.0%;
Conservative 0.
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                                                                                                                                                                                                                                                                                                                              49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MULECULE TYPE: protein SEQUENCE DESCRIPTION: £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               i: (732)
(732) 59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                 INVENTION:
                                                                                                                                                                                                                                                                APPLICANT: Bayne,
Thomas
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                                                                                                                                                                                                                                                                                                   TITLE
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Best Local
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RESULT

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GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 138;
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r: 126 E. Lincoln'A
Rahway
: New Jersey

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                                                                       Washington
                                                                                                                                                                                                                             OPERATING SYSTEM:
SOFTWARE: Patent
          OF INVENTION: OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
96; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WUI64470
                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -08-586-039B-45
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                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-039-297B-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
CITY: Ra
STATE: N
                                                                                                                                                      COUNTRY:
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                                                                                                         STREET:
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                                                                                                                      CITY:
STATE:
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Best Local
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                                                                                            GROWTH
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                                                                                            CELL
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Pred. No. 1.3e-78;
0; Mismatches 0;
                                                                                                                                                                                                                                             COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/699,769
FILING DATE: 30-Oct-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/586,039
FILING DATE: 16-JAN-1996
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                        Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL
C SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DB
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                      EE: Merck & Co., Inc.
126 E. Lincoln Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2) 594-3905
594-4720
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Patent No. 5919899
GENERAL INFORMATION:
APPLICANT: PERSICO, MARIA
APPLICANT: MAGIONE, DOMENICO
             Sequence 37, Application US/09699769 Patent No. 6569434 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 138 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          138
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Conservative 0;
                                                            APPLICANT: Bayne, Marvin L. Thomas Jr., Kenn
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                                                                                                                                        CORRESPONDENČE ADDRESS:
ADDRESSEE: Merck &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
ULE TYPE: protein
NCE DESCRIPTION: $
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                                                                                                                                                                                                      Jersey
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INFORMATION FOR SEQ ID NO:
                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                   07065-0900
                                                                                                                                                                                       Rahway
                                                                                                                                                                                                                     COUNTRY: USA
                                                                                                                                                                                                         New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 138; Conser
                                                                                                                                                                       STREET:
                                                                                                                                                                                       CITY:
                                                                                                                                                                                                                                    ZIP:
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-09-699-769-37
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US-08-039-297B-8
75-697-669-60-SU
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FOR
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                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 501.5; DB 2;
Pred. No. 1.2e-50;
; Mismatches 32;
CODING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120 LTFSQHVRCECRPLREKMKPERRRPKGRGKRRREKQ
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                                                                                 WEILACHER
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Thomas Jr., Kenneth A.
Thomas Jr., Kenneth A.
Thomas Jr., Kenneth A.
SEQUENCES
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: IT 48315-A90\
FILING DATE: 27-SEP-1990
ATTORNEY/AGENT INFORMATION:
NAME: Weilacher, Robert G
REGISTRATION NUMBER: 20,531
REFERENCE/DOCKET NUMBER: 48573
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-659-2811
TELEFAX: 202-659-1462
                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/039,297B FILING DATE: 19-APR-1993
                                                                                                                                                                              ZIP: 20036
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 45, Application US/08586039B Patent No. 6140073
                                                                                 DeGRANDI,
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NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23;
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1850 M Street, N.W
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49
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illarity 61.5%;
Conservative 2
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APPLICANT: Bayne, Marvir
APPLICANT: Thomas Jr., F
TITLE OF INVENTION: VASC
TITLE OF INVENTION: SUBI
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
                                             NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: BEVERIDGE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
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CLASSIFICATION:
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-09-431-888-5
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170
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TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTO
C SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 501.5; DB 3;
Pred. No. 1.2e-50;
3; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MTFSQDVLCECRPILETTKAERRKTKGKRKQSKTPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/699,769
FILING DATE: 30-Oct-2000
                                                                                                                                   CLASSIFICATION DATA:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/124,259

FILING DATE: 20-SEP-1993

APPLICATION NUMBER: 07/676,436

FILING DATE: 28-MAR-1991

ATTORNEY/AGENT INFORMATION:

NAME: Hand, J. Mark

REGISTRATION NUMBER: 36,545

REFERENCE/DOCKET NUMBER: 18361DA

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELEPHONE: (908) 594-3905
                                                                                                 APPLICATION NUMBER: US/08/586,039B
FILING DATE: 16-JAN-1996
                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Microsoft Word 6 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
US-09-699-769-45
; Sequence 45, Application US/09699769
; Patent No. 6569434
; Patent No. 6569434

ZENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck & Co.,
STREET: 126 E. Lincoln A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59.3%; Soilarity 61.5%; Proceed Conservative 23;
   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                              SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                              170 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: New Jersey
COUNTRY: USA
ZIP: 07065-0900
                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
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Thomas
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                                                                                                                                                                                                                                                                                                                                                                                 Tree.
STRANDEDNESS: sir
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                                                                                                                                 CLASSIFICATION:
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Best Local S
Matches 96
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APPLICANT: Wise, Lyn M
APPLICANT: Mercer, Andrew A
APPLICANT: Savory, Loreen J
APPLICANT: Stophen B
APPLICANT: Stacker, Stephen B
APPLICANT: Stacker, Stephen
TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM
TITLE OF INVENTION: VIRUS NZ2 BINDS AND ACTIVATES MAMMALIAN VEGF
TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF
FILE REFERENCE: Sequence Listing for 09/431,833
Patent No. 6541008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --QGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IADEHPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 501.5; DB 4;
Pred. No. 1.2e-50;
23; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DB
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/586,039
FILING DATE: 16-JAN-1996
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   499.5;
No. 26
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CURRENT APPLICATION NUMBER: US/09/431,888
CURRENT FILING DATE: 1999-11-02
EARLIER APPLICATION NUMBER: 60/106,689
EARLIER FILING DATE: 1998-11-02
EARLIER APPLICATION NUMBER: 60/106,800
EARLIER FILING DATE: 1998-11-03
NUMBER OF SEQ ID NOS: 11
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE DESCRIPTION: SEQ ID NO: -09-699-769-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred.
                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
TELEPHONE: (732) 594-3905
TELEFAX: (732) 594-4720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5, Application US/09431888A
5. 6541008
                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
LENGTH: 170 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MLAMKLFTCFLOVLAGLAVHS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23;
                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 th Similarity 61.5%; 96; Conservative 2
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                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear ULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-431-888-5; Sequence 5, Applicat; Patent No. 6541008; GENERAL INFORMATION:
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                                                                                       57 IADEHPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMOILKIPPNRDPHSYVE
                        1 MLAMKLFTCFLQVLAGLAVHS----QGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVY
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Gaps
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                                                                                                                                                                                                                                                          APPLICANT: Bayne, Marvin L.
APPLICANT: Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
TITLE OF INVENTION: SUBUNIT
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
Indels
                                                                                                                                             Score 498.5; DB 3;
Pred. No. 2.3e-50;
23; Mismatches 30;
32;
                                                                                                                             MTFSQDVLCECRPILETTKAERRKTKGKRKQSKTPQ
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MBER: US/08/586,039B
16-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18361DA
                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Microsoft Word 6 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/586,0
                                                                                                                                                                                                                    41, Application US/08586039B
5. 6140073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Hand, J. Mark
                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Merck & ..., STREET: 126 E. Lincoln Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36,545
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23;
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ilarity 62.1%;
Conservative 2
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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SEQ ID NO:
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amino acids
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  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                          ew Jersey
USA
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GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE:
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Best Local
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Matches
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                                                                                                                                                                          APPLICANT: Bayne, Marvin L.
Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
C SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    149
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                                 152
                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/699,769
FILING DATE: 30-Oct-2000
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MTFSQDVLCECRPILETTKAERRKTKGKRKQSK
                      MIFSODVLCECRPILETTKAERRKTKGKRKQSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18361DB
TELECOMMUNICATION INFORMATION:
TELEPHONE: (732) 594-3905
TELEFAX: (732) 594-4720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/586,039
FILING DATE: 16-JAN-1996
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
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SEQUENCE CHARACTERISTICS:
LENGTH: 154 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 47
                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merck & Co., Inc.
STREET: 126 E. Lincoln Avenue
                                                                                                                                                                                                                                                                                                                                                      COUNTRY: ....
ZIP: 07065-0900
COMPUTER READABLE FORM:
                                                                                                                      Sequence 41, Application US/09699769
Patent No. 6569434
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23;
                                                                                                                                                                                                                                                                                                                                       STATE: New Jersey
COUNTRY: USA
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                                                                                                          US-09-699-769-41
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 117
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RESULT 11
US-08-469-427A-14

Sequence 14, Application US/08469427A

Patent No. 5607918

GENERAL INFORMATION:

APPLICANT: Eriksson, Ulf

APPLICANT: Olofsson, Birgitta

APPLICANT: Alitalo, Kari

APPLICANT: Pajusola, Katri

TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND

TITLE OF INVENTION: DNA CODING THEREFOR

TITLE OF SEQUENCES: 17

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MARIA
DOMENICO
NUCLEOTIDE SEQUENCES CODING FOR A
HUMAN
PROTEIN WITH ANGIOGENESIS REGULATIVE PROP
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                                                                                                                                                                                                                                STREET: 1200 G Street, N.W., Suite 700
CITY: Washington
STATE: DC
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                          Lenahan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 474.5; DB 1;
Pred. No. 1.4e-47;
); Mismatches 27;
                                                                                                                                                                                                                        McKeown, Edwards & st, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 08/397,651
FILING DATE: 01-MAR-1995
ATTORNEY/AGENT INFORMATION:
NAME: Evans, Joseph D
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 41979cp2
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                               MBER: US/08/469,427A
06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/08039297B; Patent No. 5919899; GENERAL INFORMATION:
APPLICANT: PERSICO, MARIA
APPLICANT: MAGIONE, DOMENICO
TITLE OF INVENTION: HUMAN
TITLE OF INVENTION: PROTEIN WITH AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               117 MTFSQDVLCECRPILETTKAER 138
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120 LTFSQHVRCECRPLREKMKPER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (202) 628-8800
202) 628-8844
SEQ ID NO: 14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56.1%;
64.1%;
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amino acid
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LENGTH: 149 amino acid
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                                                                                                                                                                                                                         Evenson,
                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
FILING DATE: 06-JUN
CLASSIFICATION: 435
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TELEFAX: (202) 6:
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hes 91; Conser
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TOPOLOGY: 11
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US-08-469-427A-14
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--OGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: ALITALO, Kari
APPLICANT: PAJUSOLA, Kari
TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND
TITLE OF INVENTION: DNA CODING THEREFOR
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 149;
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                               & YOUNG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEE: Evenson, McKeown, Edwards & Lenahan,
1 1200 G Street, N.W., Suite 700
Washington
                                                                                                                                                                                                                 Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
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                                WEILACHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 474.5;
Pred. No. 1.4e
19; Mismatches
                                                                                                                                                                                                                             FILING DATE: 19-APR-1993
CLASSIFICATION: 435
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: IT 48315-A90\
FILING DATE: 27-SEP-1990
ATTORNEY/AGENT INFORMATION:
NAME: Weilacher, Robert G
REGISTRATION NUMBER: 20,531
REFERENCE/DOCKET NUMBER: 48573
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-659-2811
TELEFAX: 202-659-1462
INFORMATION PORT
                                                                                                                                                                                                          SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/039,297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             138
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                                DeGRANDI,
                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 21, Application US/08569063C
Patent No. 5928939
GENERAL INFORMATION:
APPLICANT: ERIKSSON, Ulf
APPLICANT: OLOFSSON, Birgitta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLAMKLFTCFLOVLAGLAVHS--
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Birgitta
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                                               1850 M Street, N.W.
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llarity 64.1%;
Conservative
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OLOFSSON, BILS
                               BEVERIDGE,
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                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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               CORRESPONDENCE ADDRESS:
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                                                     STREET: 1850
TTTY: Washington
OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
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                              ADDRESSEE:
ADDRESSEE:
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STATE: DC
COUNTRY: US
ZIP: 20005
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-08-569-063C-21
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                                                                                                              COUNTRY:
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and Uses
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Sequence 55, Application US/08795430
Patent No. 6130071
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Alitalo, Kari
APPLICANT: Joukov, Vladimir
TITLE OF INVENTION: Vascular Endothelial Growth Factor
TITLE OF INVENTION: Protein and Gene, Mutants Thereof,
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Boru
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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              ISM PC compatible
SYSTEM: PC-DOS/MS-DOS
Patentin Release #1.0, Version #1.25
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                                                                                         US/08/569,063C
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MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0,

CURRENT APPLICATION DATA:
                                                                                                                                     APPLICATION NUMBER: US 08/469,427
FILING DATE: 06-JUN-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                 APPLICATION NUMBER: US 08/397,651
FILING DATE: 01-MAR-1995
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                NAME: EVANS, Joseph D
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                              (202) 628-8800
                                                                                         APPLICATION NUMBER: US/08
FILING DATE: 06-DEC-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                          TELEFAX: (202) 628-8844
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                          149 amino acids
                                                                           CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                          single
FORM:
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                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS: Sil
                            COMPUTER: IBM PC
OPERATING SYSTEM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Illinois
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TELEPHONE: (202)
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READABLE
               TYPE:
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                                                             SOFTWARE:
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IADEHPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVE
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Patent No. 6140073
GENERAL INFORMATION:
APPLICANT: Bayne, Marvin L.
APPLICANT: Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
TITLE OF INVENTION: SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56.1%; Score 474.5; DB 3; larity 64.1%; Pred. No. 1.4e-47; Conservative 19; Mismatches 27;
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3R: 28967/33691
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ZIP: 07065-0900

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk

"AMPUTER: IBM PC COMPATIBLE
  PCT/FI96/00427
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                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/601,132
FILING DATE: 14-FEB-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/585,895
FILING DATE: 12-JAN-1996
PRIOR APPLICATION DATA:
                                                                                                                                                                                                    APPLICATION NUMBER: 08/510,133
FILING DATE: 01-AUG-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/340,011
FILING DATE: 14-NOV-1994
                                                                                                                                                                                                                                                    MMBER: 08/340,011
14-NOV-1994
                                                MBER: 08/671,573
28-JUN-1996
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                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 28
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6300
TELEFAX: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                not relevant
APPLICATION NUMBER: PCT/I
FILING DATE: 01-AUG-1996
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Gass, David A.
REGISTRATION NUMBER: 38,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Merck & Co.,
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
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                                                   APPLICATION NUMBER: FILING DATE: 28-JU
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91; Conser
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CITY: Rahway
STATE: New Je
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino STRANDEDNESS:
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Search completed: September 13, Job time: 33 secs

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version - 2004
GenCore
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US-10-071-370A-4 846 score: Title: Perfect

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1335176 segs, 320689617 residues 0 Gapext Searched:

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Database

Published Applications AA:\*

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7: /cgn2\_6/ptodata/2/pubpaa/US08\_NEW\_PUB.pep:\*

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# SUMMARIES

Description	Sequence 4, Appli	6, A	9, Ap	e 9, 7	Sequence 9, Appli	Sequence 5, Appli	6	115,	e 115,	Sequence 55, Appl	28,	102,	5, 7	226,	12
QI.		US-10-071-370A-6	US-09-852-209A-9	US-10-439-337A-9	US-10-303-997B-9	US-10-352-153-5	US-10-131-600-9	US-09-795-006A-115	US-10-211-462-115	US-10-201-386-55	US-10-262-538-28	US-10-021-660-102	US-10-346-802-5	US-10-116-275-226	US-10-440-464-128
DB	4	14	σ		12	12	14	σ	12	14	14	14	14	15	15
Length	2	138	170	170	170	170	170	149	149	149	149	149	149	149	221
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Score	46	4	99.	99.	99.	499.5	99.	74.	74.	74.	74.	74.	74.	74.	50.
Result No.	н	7	m	4	2	9	7	89	თ	10	11	12	13	14	15

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1 MLAMKLFTCFLQVLAGLAVHSQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADE

APP CAP	quence 2, Appli equence 28, Appl equence 8, Appl quence 3, Appli equence 6, Appl	6 6, APP1 147, APP1 7, APP1 8 7, APP1 8 8, APP1 8 5, APP1	equence 9, A equence 7, A	PPPL PPPL PPPL APP
12 US-10-343-825A-15 9 US-09-349-954A-22 9 US-09-907-007-22 12 US-10-673-708-22	US-09-812-133-2 4 US-10-293-157-28 4 US-10-268-447-8 US-09-244-694-3 2 US-10-370-291-6	5 US-10-39 5 US-10-41 US-09-795 0 US-09-93 2 US-10-37 3 US-10-12	3 US-10-060-523- 4 US-10-084-488- 4 US-10-268-447- 4 US-10-120-398- 4 US-10-120-414- 4 US-10-120-377-	<b>p</b>
$\omega$ $H$ $H$ $H$ $\omega$	<b>7</b>	<del>                                      </del>	$\mathbf{m}$ $\mathbf{m}$ $\mathbf{m}$ $\mathbf{m}$ $\mathbf{m}$ $\mathbf{m}$	232 11441 11445 1190 1190 1190
37.7.6				36.99 36.99 36.99 36.99 36.99
				315 312.5 312.5 312.5 312.5 312.5 312.5
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Gaps
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                                                       APPLICANT: Bayne, Marvin L.
APPLICANT: Bayne, Marvin L.
APPLICANT: Conn, Gregory L.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
TITLE OF INVENTION NUMBER: US/10/071,370A
CURRENT FILING DATE: 1999-06-07
PRIOR FILING DATE: 1999-06-07
PRIOR FILING DATE: 1994-08-31
PRIOR FILING DATE: 1993-01-05
PRIOR FILING DATE: 1993-01-05
PRIOR FILING DATE: 1990-09-21
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1.1e-83;
hes 0;
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Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 29
SOFTWARE: FastSEQ for Windows Version 4.0
Sequence 4, Application US/10071370A Publication No. US20030045471A1 GENERAL INFORMATION:
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SEQ ID NO 4
LENGTH: 158
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Best Local S
Matches 158
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US-09-852-209A-9
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Best Local
Matches 9
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SEQ ID NO 9
LENGTH: 1
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                       61 HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFS
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APPLICANT: Conn, Gregory L.
APPLICANT: Thomas, Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
TITLE OF INVENTION: II
FILE REFERENCE: 18199CB
CURRENT APPLICATION NUMBER: US/10/071,370A
CURRENT FILING DATE: 2002-02-08
PRIOR APPLICATION NUMBER: 09/326,879
PRIOR FILING DATE: 1999-06-07
PRIOR FILING DATE: 1998-03-10
PRIOR FILING DATE: 1998-03-10
PRIOR FILING DATE: 1998-03-10
PRIOR FILING DATE: 1998-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 138;
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APPLICANT: OESTMAN, Arne
APPLICANT: HELDIN, Carl-Henrik
APPLICANT: BETSHOLTZ, Christer
TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR C,
                                                                                           158
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red. No. 3.1e-72;
Mismatches 0;
                                                                           ODVLCECRPILETTKAERRYKGKRKQSKTPQTEEPHL
                                                           ODVLCECRPILETTKAERRKTKGKRKQSKTPQTEEPHL
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Pred. No.
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PRIOR FILING DATE: 1990-09-21
NUMBER OF SEQ ID NOS: 29
                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1994-08-31
APPLICATION NUMBER: 08/000,834
FILING DATE: 1993-01-05
                                                                                                                                                             Sequence 6, Application US/10071370A Publication No. US20030045471A1 GENERAL INFORMATION:
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UUTELA, Marko
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Patent No. US20020164687A1
GENERAL INFORMATION:
APPLICANT: ERIKSSON, Ulf
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APPLICANT:
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Matches 13
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APPLICANT:
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1 MLAMKLFTCFLQVLAGLAVHS----QGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVY
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TITLE OF INVENTION: THEREFOR, AND USES THEREOF FILE REFERENCE: 09-410349-Eriksson et al-1064-44740 CURRENT APPLICATION NUMBER: US/09/852,209A CURRENT FILING DATE: 2001-05-10
                                                                                                                                                                                                                                                                                                                                                                                             117 MTFSQDVLCECRPILETTKAERRKTKGKRKQSKTPQ 152
                                                                                                                                                                                                                                                      Score 499.5; DB 9;
Pred. No. 5.6e-46;
1; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 09/410,349
PRIOR FILING DATE: 1999-09-30
PRIOR APPLICATION NUMBER: 60/110,749
PRIOR FILING DATE: 1998-12-03
PRIOR APPLICATION NUMBER: 60/113,002
PRIOR FILING DATE: 1998-12-18
PRIOR APPLICATION NUMBER: 60/135,426
PRIOR APPLICATION NUMBER: 60/135,426
PRIOR FILING DATE: 1999-05-21
PRIOR FILING DATE: 1999-07-15
NUMBER OF SEQ ID NOS: 39
SOFTWARE: Patentin Ver. 2.0
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61.5%;
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                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Homo sapiens
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APPLICANT: Wise, Lyn M

APPLICANT: Wise, Lyn M

APPLICANT: Savory, Loreen J

APPLICANT: Stacker, Stephen B

APPLICANT: Stacker, Stephen B

APPLICANT: Stacker, Stephen

TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF

TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF

TITLE OF INVENTION: VASCULAR ENOTHELIAL GROWTH FACTOR-LIKE PROTEIN FROM ORF

TITLE OF INVENTION: RECEPTOR-2, AND USES THEREOF

TITLE OF INVENTION: RECEPTOR-1, AND USES THEREOF

TITLE OF INVENTION NUMBER: US/10/352,153

CURRENT APPLICATION NUMBER: US/09/431,888A

PRIOR FILING DATE: 1999-11-02

PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-03

PRIOR FILING DATE: EARLIER FILING DATE: 1998-11-03
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Pred. No. 5.6e-46;
3; Mismatches 32;
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; Publication No. US20030082670A1
; GENERAL INFORMATION:
; APPLICANT: ERIKSSON, Ulf
; APPLICANT: LEE, Karin
; APPLICANT: PONTEN, Annica
APPLICANT: PONTEN, Annica
APPLICANT: ALITALO, Kari
APPLICANT: OESTMAN, Arne
APPLICANT: HELDIN, Carl-Henrik
APPLICANT: BETSHOLTZ, Christer
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             US-10-352-153-5; Sequence 5, Application US/10352153; Publication No. US20030211101A1; GENERAL INFORMATION:
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larity 61.5%;
Conservative
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SOFTWARE: Patentin Ver.
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LENGTH: 170
TYPE: PRT
ORGANISM: HO
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Best Local S
Matches 96
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FENTION: COMPOSITION AND METHOD FOR MODULATING VASCULOGICE: 029065.44740C3
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                                                                         DB 12;
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                                                                        Score 499.5; DB 12,
Pred. No. 5.6e-46;
; Mismatches 32;
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FILE REFERENCE: 029065.44740C3
CURRENT APPLICATION NUMBER: US/10/303,997B
CURRENT FILING DATE: 2002-11-26
PRIOR FILING DATE: 1999-09-30
PRIOR FILING DATE: 1998-09-30
PRIOR FILING DATE: 1998-09-30
PRIOR FILING DATE: 1998-11-12
PRIOR FILING DATE: 1998-11-12
PRIOR FILING DATE: 1998-11-12
PRIOR FILING DATE: 1998-12-03
PRIOR FILING DATE: 1998-12-03
PRIOR FILING DATE: 1998-12-18
PRIOR FILING DATE: 1999-05-21
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larity 61.5%; Pred. No. 5.66
Conservative 23; Mismatches
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UMBEP-
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                                                                                                                                                       1 MLAMKLFTCFLQVLAGLAVHS--
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PatentIn version 3.1
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                                                                          59.0%;
llarity 61.5%;
Conservative
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                    Homo sapiens
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APPLICANT: COLLUM. Des
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APPLICANT: ERIKSSON,
                                                                                             Similarity 96; Conser
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   ; ORGANISM: Homous US-10-439-337A-9
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TYPE: PRT
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Sequence 115, Application US/09795006A,
Fatent No. US20020151680A1
GENERAL INFORMATION:
APPLICANT: Alitalo et al
TITLE OF INVENTION: MATERIALS AND METHODS INVOLVING HYBRID VASCULAR
FILE REFERENCE: 28967/35977B
CURRENT APPLICATION NUMBER: US/09/795,006A
CURRENT FILING DATE: 2001-02-26
PRIOR APPLICATION NUMBER: US 60/205,331
PRIOR FILING DATE: 2000-05-18
PRIOR FILING DATE: 2000-02-25
NUMBER OF SEQ ID NOS: 175
SOFTWARE: Patentin Ver. 2.0
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                                                                                                                                                                      Score 499.5; DB 14;
Pred. No. 5.6e-46;
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Pred. No. 2.5e-43;
9; Mismatches 27;
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                                         60/144,022
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PRIOR FILING DATE: 1998-12-18
PRIOR APPLICATION NUMBER: 60/13
PRIOR FILING DATE: 1999-05-21
PRIOR APPLICATION NUMBER: 60/14
PRIOR FILING DATE: 1999-07-15
NUMBER OF SEQ ID NOS: 39
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                             59.0%;
ilarity 61.5%;
Conservative 2:
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64.1%;
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91; Conserv
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ENGTH: 149
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Matches 96
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                                                                                                SEQ ID NO 9
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Best Local (
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Application US/10211462

US-10-211-462-115; Sequence 115, A

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for Angiogenesis Modulators
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APPLICANT: Alitalo, Kari
APPLICANT: Joukov, Vladimir
TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR C (VE
TITLE OF INVENTION: AND GENE, MUTANTS THEREOF, AND USES THE
FILE REFERENCE: 28967/34140A
CURRENT APPLICATION NUMBER: US/10/201,386
CURRENT FILING DATE: 2002-07-23
PRIOR APPLICATION NUMBER: US/09/534,376
PRIOR FILING DATE: 1999-11-05
PRIOR FILING DATE: 1999-11-05
PRIOR FILING DATE: 1998-02-02
PRIOR FILING DATE: 1998-02-02
PRIOR FILING DATE: 1998-02-02
PRIOR FILING DATE: 1998-02-05
PRIOR FILING DATE: 1997-02-05
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Pred. No. 2.5e
19; Mismatches
          GENERAL INFORMATION:

APPLICANT: Murray, Richard
APPLICANT: Glynne, Richard
APPLICANT: Watson, Susan R.
APPLICANT: Aziz, Natasha
APPLICANT: Aziz, Natasha
TITLE OF INVENTION: Methods of Diagnosis of
TITLE OF INVENTION: Methods of Screening for
FILE REFERENCE: 018501-006200US
CURRENT APPLICATION NUMBER: US/10/211,462
CURRENT FILING DATE: 2003-02-13
                                                                                                                                                                                                                                               CURRENT FILING DATE: 2003-02-13
PRIOR APPLICATION NUMBER: US 09/784,356
PRIOR FILING DATE: 2001-02-14
PRIOR APPLICATION NUMBER: US 09/791,390
PRIOR FILING DATE: 2001-02-22
PRIOR FILING DATE: 2001-08-03
PRIOR FILING DATE: 2001-08-03
PRIOR FILING DATE: 2001-10-29
NUMBER OF SEQ ID NOS: 230
SOFTWARE: Patentin Ver. 2.1
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R APPLICATION NUMBER: 08/671,573

R FILING DATE: 1996-06-28

R APPLICATION NUMBER: 08/601,132

R FILING DATE: 1996-02-14

R APPLICATION NUMBER: 08/585,895

R FILING DATE: 1996-01-12
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Publication No. US20030091567A1
GENERAL INFORMATION:
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Publication No. US20040033495A1
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64.1%;
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91; Conser
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LENGTH: 149
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TITLE OF INVENTION: NEUROPILIN/VEGF-C/VEGFR-3 MATERIALS AND METHOD:
FILE REFERENCE: 28967/37564
CURRENT APPLICATION NUMBER: US/10/262,538
CURRENT FILING DATE: 2002-09-30
NUMBER OF SEQ ID NOS: 33
SOFTWARE: Patentin version 3.0
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les 27;
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larity 64.1%; Pred. No. 2.5e-43;
Conservative 19; Mismatches 27
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Pred. No. 2.
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Sequence 102, Application US/10021660
Publication No. US20030152926A1
GENERAL INFORMATION:
           PRIOR FILING DATE: 1995-08-01
PRIOR APPLICATION NUMBER: 08/340,011
PRIOR FILING DATE: 1994-11-14
NUMBER OF SEQ ID NOS: 59
08/510,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 28, Application US/10262538 Publication No. US20030113324A1 GENERAL INFORMATION:
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ilarity 64.1%;
Conservative 1
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Glynne, Richard
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Homo sapiens US-10-262-538-28
                                                                    PatentIn Ver.
                                                                                                             TYPE: PRT
ORGANISM: Homo sapiens
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: Local Similarity
-hes 91; Conserv
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nes 91; Conser
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US-10-262-538-28
                                                                        SEQ ID NO 55
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LENGTH: 149
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SEQ ID NO 2
                                                                     SOFTWARE:
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APPLICANT: Watson, Susan R.

APPLICANT: EOS Biotechnology, Inc.

TITLE OF INVENTION: No. US20030152926Alel Methods of Diagnosis of Angiogenesis

TITLE OF INVENTION: Compositions and Methods of Screening for Angiogenesis

TITLE OF INVENTION: Modulators

TITLE OF INVENTION: Modulators

FILE REFERENCE: 018501-000710US

CURRENT APPLICATION NUMBER: US/10/021,660

CURRENT FILING DATE: 2001-12-06

PRIOR APPLICATION NUMBER: US/09/784,356

PRIOR APPLICATION NUMBER: US 09/637,977

PRIOR FILING DATE: 2000-08-11

NUMBER OF SEQ ID NOS: 135

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 102

LENGTH: 149
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publication No. US20030166873A1

GENERAL INFORMATION:

APPLICANT: Lee, James

APPLICANT: Lee, James

TITLE OF INVENTION: VEGF-RELATED PROTEIN

FILE REFERENCE: P0963R1D1

CURRENT APPLICATION NUMBER: US/10/346,802

CURRENT FILING DATE: 2003-01-17

PRIOR FILING DATE: 1999-05-17

PRIOR PPLICATION NUMBER: EARLIER APPLICATION NUMBER: US

PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US

PRIOR FILING DATE: EARLIER FILING DATE: 1996-08-30

PRIOR FILING DATE: EARLIER FILING DATE: 1995-09-08

NUMBER OF SEQ ID NOS: 12
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Pred. No. 2.5e-43;
9; Mismatches 27;
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Pred. No. 2.5e-43;
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; OTHER INFORMATION: Sequence source:
US-10-346-802-5
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91; Conserv
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ORGANISM: Human
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Search completed: September 13, 2004, 10:05:10 Job time: 128 secs
      PRIOR FILING DATE: 2003-02-24
NUMBER OF SEQ ID NOS: 185
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 128
LENGTH: 221
                                                                            ; LENGTH: 221
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-440-464-128
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Matches 86
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APPLICANT: Elan Pharmaceutical Technology
APPLICANT: O'Mahony, Daniel J.
APPLICANT: Brayden, David
APPLICANT: Byrne, Daragh
APPLICANT: Lambkin, Imelda
APPLICANT: Lambkin, Imelda
APPLICANT: Higgins, Lisa
APPLICANT: Higgins, Lisa
APPLICANT: Higgins, Lisa
APPLICANT: Compositions Targeting Peyer's Patches and M Cells and TITLE OF INVENTION: Compositions Targeting Peyer's Patches and M Cell Receptors
FILE REFERENCE: E1067/20087
CURRENT APPLICATION NUMBER: US/10/116,275
CURRENT FILING DATE: 2002-10-04
NUMBER OF SEQ ID NOS: 349
SOFTWARE: Patentin version 3.1
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APPLICANT: MANNING, WILLIAM
APPLICANT: WALTER, SARAH
APPLICANT: CHERRINGTON, JULIE
APPLICANT: CHERRINGTON, JULIE
APPLICANT: SCHILLING, JIM
TITLE OF INVENTION: NOVEL BIOMARKERS OF TYROSINE KINASE INHIBITOR EXPOSURE
TITLE OF INVENTION: AND ACTIVITY IN MAMMALS
FILE REFERENCE: 038602/1592
CURRENT APPLICATION NUMBER: US/10/440,464
CURRENT FILING DATE: 2003-05-19
PRIOR FILING DATE: 2002-05-17
PRIOR FILING DATE: 2003-02-24
PRIOR FILING DATE: 2003-02-24
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Pred. No. 2.5e-43;
19; Mismatches 27;
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; Sequence 226, Application US/10116275
; Publication No. US20030211476A1
; GENERAL INFORMATION:
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                                                                         MTFSQDVLCECRPILETTKAER
                                                                                                           120 LTFSQHVRCECRPLREKMKPER
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                                                                              -- OGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVY
                       Gaps
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 Length 221
                      Indels
DB 15;
                    23;
 th 53.3%; Score 450.5; DB 1 Similarity 65.2%; Pred. No. 1.7e-40; 86; Conservative 18; Mismatches 23
                                        1 MLAMKLFTCFLQVLAGLAVHS--
                   18;
                                                                                                                       117 MTFSQDVLCECR 128
                                                                                                                                           120 LTFSQHVRCECK 131
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GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                 Copyright
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OM protein - protein search, using sw model

September 13, 2004, 09:34:08; Search time 23 Seconds (without alignments) 357.699 Million cell update Run on:

updates/sec

score: Title: Perfect sc Sequence:

US-10-071-370A-4 846 1 MLAMKLFTCFLQVLAGLAVH.....RKTKGKRKQSKTPQTEEPHL

158

Scoring table:

0.5 BLOSUM62 Gapop 10.0 , Gapext 141681 seqs, 52070155 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt\_42:\* Database Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

	escription	1 6	9764	763 homo	9xs47 bos t	ζ	73	512 rattus	692 homo	151 sus scr	kr0 equ	582	691 bos t	psl mesoc	41	517	584 orf vi	166 mus n	165	s49 bos t	48	946 mus	585 orf v	915 home	251 rattus	96	953 mus mue	02	240 mus mus	919 felis	01127 homo sa	229 ovis a	34007 orycto	s neimis
SUMMARIES		PLGF RAT	PLGF MOUSE	PLGF HUMAN	PLGF BOVIN	VEGA CANFA	VEGA_MOUSE	VEGA_RAT	VEGA_HUMAN	VEGA_PIG	HOR	VEGA CHICK	VEGA_BOVIN	VEGA MESAU	VEGA SHEEP	VEGA_CAVPO			1	VEGB BOVIN	VEGB_RAT	VEGD_MOUSE	VEGH ORFN7	VEGD_HUMAN	VEGD RAT	VEGC_HUMAN	VEGC_MOUSE	PDGB RAT	PDGB MOUSE	PDGB_FELCA	PDGB_HUMAN	1 1	GA	TSIS SMSAV
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34.5	92.5	89.5	88.5	83	81	77.5	77	77	75	74.5	74.5
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#### ALIGNMENTS

STRUMBITE		DT 28-FEB-2003 (Rel. 41, Created) DT 28-FEB-2003 (Rel. 41, Last sequence update) DT 10-OCT-2003 (Rel. 42, Last annotation update) DE Placenta growth factor precursor (PlGF).	SEQUENCE FROM N. MEDLINE=95221439 DiSalvo J., Bayn Soderman D.D., Purification an endothelial grow	J. Biol. Chem. 270:7717-7723(1995).  -!- FUNCTION: Growth factor active cell growth, stimulating their binds to receptor VEGFR-1/FLT1  -!- SUBUNIT: Antiparallel homodimer heterodimer with VEGF/VEGF-A.  -!- SUBCELLULAR LOCATION: Secreted  -!- SIMILARITY: Belongs to the PDGF	is SWISS-PROT entry is copyright. It is produced through a coll tween the Swiss Institute of Bioinformatics and the EMBL out e European Bioinformatics Institute. There are no restriction e by non-profit institutions as long as its content is in diffied and this statement is not removed. Usage by and for catities requires a license agreement (See http://www.isb-sib.ch/send an email to license@isb-sib.ch).	EMBL; L40030; AAA974 PIR; A56125; A56125. HSSP; P49763; 1FZV. InterPro; IPR000072; Pfam; PF00341; PDGF; ProDom; PD001629; PDSMART; SM00141; PDGF; PROSITE; PS00249; PDPROSITE; PS50278; PDAGiogenesis; Mitoge SIGNAL DISULFID	CARBOHYD 30 30 N-LINKED (GLUNAC
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                                                                                                                                                                                                                                                                                                                                                                                                              Romano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      growth factor
                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and endoth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: Secreted (By similarity).
Belongs to the PDGF/VEGF growth factor family
                                  158;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN=NIH Swiss;
MEDLINE=98065381; PubMed=9401819;
Achen M.G., Gad J.M., Stacker S.A., Wilks A.F.;
"Placenta growth factor and vascular endothelial growth factor are vascular endothelial growth factor active in angiogenesis, and er Growth Factors 15:69-80(1997).

-!- FUNCTION: Growth factor active in angiogenesis, and er cell growth, stimulating their proliferation and migra binds to receptor VEGFR-1/FLT1 (By similarity).

-!- SUBUNIT: Antiparallel homodimer; disulfide-linked. Als heterodimer with VEGF/VEGF-A (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Heart;
MEDLINE=97059399; PubMed=8903720; Maglione D., Lago C.T., Robipalma T., Tucci M., Russo G., Maglione D., Lago C.T., Roscone S., della Valle G., de Gregorio L., Dragani T.A., Viglietto G., Persico M.G.; "The placenta growth factor gene of the mouse."; Mamm. Genome 7:6-12(1996).
                                                      Indels
                                Length
N-LINKED (GLCNAC. . .).
B4771373A82E15B9 CRC64;
                                                                                                                                                                  158
                                                                                                                                                                                    ODVLCECRPILETTKAERRKTKGKRKOSKTPOTEEPHL 158
                                DB 1;
.1e-81;
ss 0;
                                                                                                                                                                   QDVLCECRPILETTKAERRKTKGKRKOSKTPQTEEPHL
                                                                                                                                                                                                                                                    01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Placenta growth factor precursor (PIGF).
                                            Pred. No. 5.
Mismatches
                                Score 846;
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                                                     0;
97 N
17681 MW;
                                100.0%;
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EMBL; X96793; CAA65587.1; -
HSSP; P49763; 1FZV.
MGD; MGI:105095; Pgf.
InterPro; IPR000072; PD_gro
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PD_growth
                                            ul Similarity 100
158; Conservative
                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                         (Mouse)
                                                                                                                                                                                                                                                                                                                                                                              EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY:
                                                                                                                                                                                                                                                                                                                         musculus
                                                                                                                                                                                                                                             MOUSE
 CARBOHYD
SEQUENCE
                                                                                                                        61
                                                                                                                                                                                       121
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MEDLINE=93205407; PubMed=7681160;
Maglione D., Guerriero V., Viglietto G., Ferraro M.G., Aprelikova Alitalo K., del Vecchio S., Lei K.-J., Chou J.Y., Persico M.G.; "Two alternative mRNAs coding for the angiogenic factor, placenta growth factor (PlGF), are transcribed from a single gene of chromosome 14."; Oncogene 8:925-931(1993).
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for a protein related
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
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                                                                                                                                                                                                                                                                                                                                    th factor; Glycoprotein; Signates Similarity.
PLACENTA GROWTH FACTOR.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
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"A heparin-binding form of placenta growth factor (PlGF-)
expressed in human umbilical vein endothelial cells and
placenta.";
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1.2e-74;
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TISSUE=Placenta;
TISSUE=92021031; PubMed=1924389;
MEDLINE=92021031; PubMed=1924389;
Maglione D., Guerriero V., Viglietto G., Delli-Bc
"Isolation of a human placenta cDNA coding for a
"Isolation of a human placenta cDNA coding for a
the vascular permeability factor.";
the vascular permeability factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F16128BEA0790438 C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 785; DB Pred. No. 1.2e 6; Mismatches
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Catarrhini;
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TISSUE=Placenta;
MEDLINE=94198032; PubMed=8148155;
SMART; SM00141; PDGF; 1.

PROSITE; PS00249; PDGF_1; 1.

PROSITE; PS50278; PDGF_2; 1.

KW Angiogenesis; Mitogen; Growth fa sIGNAL

T SIGNAL

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TSULFID

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Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Growth Factors 9:259-268(1993)
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ilarity 92.4%;
Conservative
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Heilig R., Eckenberg R., Petit J.-L., Fonknechten N., Da Silva C.,
A Heilig R., Eckenberg R., Petit J.-L., Fonknechten N., Da Silva C.,
A Cattolico L., Levy M., Barbe V., De Berardinis V., Ureta-Vidal A.,
A Cattolico L., Levy M., Barbe V., De Berardinis V., Ureta-Vidal A.,
Belletier E., Vico V., Anthouard V., Rowen L., Madan A., Qin S.,
Cure S., Segurens B., Aniere F., Samain S., Crespeau H., Abbasi N.,
A Aiach N., Boscus D., Dickhoff R., Dors M., Dubois I., Friedman C.,
A Anach N., Menard M., Oztas S., Ratcliffe A., Shaffer T., Trask B.,
Martins N., Menard M., Oztas S., Ratcliffe A., Shaffer T., Trask B.,
A Dufosse-Laurent V., Ferron C., Besnard-Gonnet M.,
Bartol-Mavel D., Boutard M., Briez-Silla S., Combette S.,
A Magdelenat G., Pateau E., Petit E., Bordelais I., Dubois M.,
Vega-Czarny N., Bataille E., Bluet E., Bordelais I., Dubois M.,
A Dumont C., Guerin T., Haffray S., Hammadi R., Muanga J., Pellouin V.,
A Nobert D., Wunderle E., Gauguet G., Roy A., Sainte-Marthe L.,
Robert D., Wunderle E., Gauguet G., Roy A., Sainte-Marthe L.,
A Watsuda F., Wilson R., Scarpelli C., Gyapay G., Wincker P., Saurin W.,
A Quetier F., Waterston R., Hood L., Weissenbach J.;
A The DNA sequence and analysis of human chromosome 14.";
A Nature 421:601-607(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS) (ISOFORM PLGF-1).
MEDLINE=21192270; PubMed=11069911;
Iyer S., Leonidas D.D., Swaminathan G.J., Maglione D., Battisti M.,
Tucci M., Persico M.G., Acharya K.R.;
"The crystal structure of human placenta growth factor-1 (PlGF-1), an angiogenic protein, at 2.0 A resolution.";
J. Biol. Chem. 276:12153-12161(2001).
-! - FUNCTION: Growth factor active in angiogenesis, and endothelial cell growth, stimulating their proliferation and migration. It
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Muscle, and Placenta;

X SEQUENCE FROM N.A. (ISOFORM PLGF-2).

TISSUE=Muscle, and Placenta;

X MEDLINE=22388257; PubMed=12477932;

A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Altasner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altaschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

B Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Stapleton M.J. Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

B Bosak S.A., McEwan P.U., McKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Yillalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

B Blakesley R.W., Touchman J.W., Green E.D., Myers R.M.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

B Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

T Human and mouse cDNA sequences.";

Thuman and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          T.E.,
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MEDLINE=95014370; PubMed=7929268;
Park J.E., Chen H.H., Winer J., Houck K.A., Ferrara N.;
"Placenta growth factor. Potentiation of vascular endothelial grfactor bioactivity, in vitro and in vivo, and high affinity bind to Flt-1 but not to Flk-1/KDR.";
                                                                    Cao Y., Ji W.-R., Qi P., Rosin A., Cao Y.; "Placenta growth factor: identification and characterization of novel isoform generated by RNA alternative splicing."; Biochem. Biophys. Res. Commun. 235:493-498(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ū.S.A. 99:16899-16903(2002).
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FROM N.A. (ISOFORM PLGF-3).
                                                                                                                                                                                                 FROM N.A. (ISOFORM PLGF-1).
                   TISSUE=Placenta;
MEDLINE=97350807; PubMed=9207183;
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N-LINKED (GLCNAC. . .) (POTENTIAL).
Missing (in isoform PlGF-1 and isoform PlGF-2). Also found a as homodimer but PIGF-2 in mos week) cell IsoId=P49763-1; Sequence=Displayed;

IsoId=P49763-1; Squence=VSP\_004644;

IsoId=P49763-2; Sequence=VSP\_004644;

Name=PIGF-2; Synonyms=PIGF-152;

IsoId=P49763-3; Sequence=VSP\_004644, VSP\_004645;

TISSUE SPECIFICITY: While the three forms are present in moplacental tissues, the PIGF-2 is specific to early (8 week) placenta and only PIGF-1 is found in the colon and mammary heparin retention signal. PTM: N-glycosylated. SIMILARITY: Belongs to the PDGF/VEGF growth factor family of cell proliferation; ; TAS. which acts as PLACENTA GROWTH FACTOR. HEPARIN-BINDING (PROBABLE) forms are secreted unless released by Glycoprotein; 3D-structure isoforms=3 GO; GO:0008083; F:growth factor activity; TAS.
GO; GO:0008284; P:cell-cell signaling; TAS.
GO; GO:0008284; P:positive regulation of cell
GO; GO:0007165; P:signal transduction; TAS.
InterPro; IPR000072; PD\_growth\_factor.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PD\_growth\_factor.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF\_1; 1.
PROSITE; PS50278; PDGF\_2; 1.
Angiogenesis; Mitogen; Growth factor; Glycopro Heparin-binding; Alternative splicing; 3D-strusiGNAL a basic insert INTERCHAIN INTERCHAIN Event=Alternative splicing, Named Name=PlGF-3; appears to remain cell attached ALTERNATIVE PRODUCTS: VEGFR-1/FLT1. heterodimer with VEGF/VEGF-A. EMBL; X54936; CAA38698.1; -.
EMBL; S72960; AAB30462.2; -.
EMBL; S57152; AAB25832.2; ALT\_SE
EMBL; AC006530; AAD30179.1; -.
EMBL; BC001422; AAH01422.1; -.
EMBL; BC007789; AAH07789.1; -.
EMBL; BC007255; AAH07255.1; -.
EMBL; A18411; CAA01393.1; -.
PIR; A41236; A41236.
PDB; 1FZV; 09-MAY-01.
Genew; HGNC:8893; PGF. a heparin-dependent manner SUBUNIT: Antiparallel homo contains and as monomer. SUBCELLULAR LOCATION: 221 213 94 128 130 33 101 203 carcinomas. DOMAIN: PLGF-2 193 193 83 87 77 77 86 33 101 132 601121; DISULFID DISULFID DISULFID DISULFID DISULFID CARBOHYD MIM; 

isoform

/FTId=VSP 004644. R -> RRRPKGRGKRREKORPTDCHL (in PlGF-2).

004645 (IN REF.

/FTIG=VSP  $N \rightarrow D (TN$ 

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CONFLICT

VARSPLIC

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DISULFID
DISULFID
CARBOHYD
CARBOHYD
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                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                         SEQUENCE
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Best Local
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                                                                                                  CHAIN
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Matches
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     Ωp
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                                                                                                                                                                                                                                                                                                                                                                                                                                               57 IADEHPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RP-SYVE
                                                                                                                                                                                                                                                                                                                                  Gaps
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dea;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoide; Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.clor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Liu X., Yonekura H., Yamagishi S., Yamamoto Y., Yamamoto H.;
"Structure and expression of bovine VEGF family.";
Structure and expression of bovine VEGF family.";
Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: Growth factor active in angiogenesis, and endother cell growth, stimulating their proliferation and migration binds to receptor VEGFR-1/FLT1 (By similarity).

-!- SUBUNIT: Antiparallel homodimer; disulfide-linked. Also for heterodimer with VEGF/VEGF-A (By similarity).

-!- SUBCELLULAR LOCATION: Secreted (By similarity).

-!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  221;
                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                       D364C6A73C1C6987 CRC64
                                                                                                                                                                                                                                                                                       Score 450.5; DB 1;
Pred. No. 1.2e-39;
18; Mismatches 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEB-2003 (Rel. 41, Created)
FEB-2003 (Rel. 41, Last sequence update)
OCT-2003 (Rel. 42, Last annotation update)
centa growth factor precursor (PIGF)
OR PLGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AB004272; BAA77684.1; -.
HSSP; P49763; 1FZV.
InterPro; IPR000072; PD_growth_factor.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PD_growth_factor; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                              18;
                                                                                                                                                                                                                                                    24788 MW;
                                                                                                                                                                                                                                                                                         53.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128
                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
   117 MIFSQDVLCECR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120 LTFSQHVRCECR
                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
40
43
51
53
61
62
77
77
86
90
90
111
111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Heart;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9XS47;
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-FEB-2003
10-OCT-2003
                                                                                                                                                                                                                                                                                                                              96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BOVIN
                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Placenta
                                                                                                                                                                                                                                                                                         Query Match
Best Local
Matches 8
                                                                                                                                                       STRAND
TURN
                                     STRAND
                                                           STRAND
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                                                                                                                                                                                              STRAND
                                                                                                                                                                                                                                    STRAND
                                                                                             HELIX
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                                                                              TURN
                                                                                                                                                                                                                 TURN
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116
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                                                                                                                                                                                                                                                                                                                                                                      ---HSQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OF
                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jingjing L., Roque R.S.;
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: Growth factor active in angiogenesis, vasculogenesis ar endothelial cell
growth. It induces endothelial cell
proliferation, promotes cell migration, inhibits apoptosis, and
induces permeabilization of blood vessels. It binds to the
VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   as heterodimer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cells
                                                                      PLACENTA GROWTH FACTOR.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

INTERCHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

N-LINKED (GLCNAC. . .) (POTENTIAL).

N-LINKED (GLCNAC. . .) (POTENTIAL).

N-LINKED (GLCNAC. . .) (POTENTIAL).

N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Vascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Steiner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi
                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    its receptors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEGF-182 AND VEGF-164)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               associated to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              to the extracellular matrix unless released by heparin
                                              Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Canis
                                                                                                                                                                                                                                 Length
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Э
                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (VEGF-A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kaser-Hotz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 disulfide-linked. Also found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
NCBI_TaxID=9615;
                                              Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          icing; Named isoforms=3; isoforms seem to exist;
                                                                                                                                                                                                                                                   7;
32;
                                                                                                                                                                                                                               Score 426.5; DB 1;
Pred. No. 2.4e-37;
25; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEGA CANFA STANDARD; PRT; 214 AA. Q9MYV3; Q9XSF3; Q9XSF4; Q9XSF5; 28-FEB-2003 (Rel. 41, Created) 28-FEB-2003 (Rel. 41, Last sequence update) 10-OCT-2003 (Rel. 42, Last annotation update) Vascular endothelial growth factor A precursor permeability factor) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBUNIT: Homodimer; disulfide-linked. Also with PlGF (By similarity). SUBCELLULAR LOCATION: Secreted but remains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    growth factor (VEGF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. (ISOFORM VEGF-188).
MEDLINE=20125516; PubMed=10661874;
Scheidegger P., Weiglhofer W., Suarez S.,
                                                             POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ISOFORMS VEGF-188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Event=Alternative splicing; Named Comment=Additional isoforms seem
                                                                                                                                                                                                                                                                                                                                                                                                                                 380:1449-1454(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                  MIFSODVLCECRPILETTKAER
                                                                                                                                                                                                                                                            25;
SMART; SMUO141; F.C., PROSITE; PS00249; PDGF 1; 1. PROSITE; PS50278; PDGF 2; 1.
                                                                                                                                                                                                 17094 MW;
                                                                                                                                                                                                                                                                                          1 MLAMKLFTCFLQVLAGLAV-
                                                                                                                                                                                                                             50.4%;
ilarity 56.3%;
Conservative 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               heparin (By similarity)
SUBUNIT: Homodimer: dis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scheidegger P., Weiglhofer
Ballmer-Hofer K., Jaussi R
"Vascular endothelial growt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALTERNATIVE PRODUCTS:
                                                                          149
94
128
130
77
86
33
                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
TISSUE=Heart;
                                                                                                                                                                                                                                             Similarity
80; Conser
                                                                       119
83
87
77
77
101
149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bearing dogs."
Biol. Chem. 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              similarity)
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outstation -
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                                                                                                                                                          laboration
                                                                                                                                                                                                                          n no way
commercial
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                                                                                                                                                                                                    restrictions on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ä.
                                                                                                                                                                                                                              in
                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collectween the Swiss Institute of Bioinformatics and the EMBL out the European Bioinformatics Institute. There are no restriction use by non-profit institutions as long as its content is is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.ch.or.send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEHPNEVSHIFSPSCVL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENDOTHELIAL GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         214;
                                                                                      5, VSP 004616;
growth factor family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Missing (in isoform VEGF-164).
/FTId=VSP 004616.
Missing (in isoform VEGF-182).
/FTId=VSP 004617.
I -> V (IN REF. 2).
P -> S (IN REF. 2).
P -> S (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           splicing; Multigene family.
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D (GLCNAC. . .) (POTE)
(in isoform VEGF-164)
SP 004615.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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INTERCHAIN (BY SIMILARITY)
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46;
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Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY SIMILARITY
BY SIMILARITY
                                                                                      IsoId=Q9MYV3-3; Sequence=VSP 004615, SIMILARITY: Belongs to the PDGF/VEGF g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY
                                           004617
IsoId=Q9MYV3-1; Sequence=Displayed;
Name=VEGF-182;
                                                                                                                                                                                                                                                                                                       EMBL; AJ133758; CAB82426.1; -.
EMBL; AF133250; AAD29684.1; -.
EMBL; AF133249; AAD29683.1; -.
EMBL; AF133248; AAD29683.1; -.
HSSP; P15692; 1VGH.
InterPro; IPR000072; PD_growth_factor.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PD_growth_factor; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FTId=VSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VASCULAR
                                            IsoId=Q9MYV3-2; Sequence=VSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
Mitogen; Angiogenesis; Growth faleparin-binding; Alternative splanding; Alterna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143 I
161 P
25175 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38.1%;
ilarity 49.6%;
Conservative 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                     Name=VEGF-164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         159
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CONFLICT
SEQUENCE
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(VEGF-A) (Vascula

993 (Rel. 25, Created)
996 (Rel. 34, Last sequence update)
103 (Rel. 42, Last annotation update)
endothelial growth factor A precursor
lity factor) (VPF).

permeability factor)

01-APR-1993 ( 01-OCT-1996 ( 10-OCT-2003 ( Vascular endo

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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     regulatory sequences.";
J. Biol. Chem. 271:3877-3883(1996).

-!- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. It induces endothelial cell promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and heparin (By similarity).

-!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            expressed mainly in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                with PlGF (By similarity).

SUBCELLULAR LOCATION: VEGF-1 and VEGF-2 are secreted while VEGF-3 remains cell-surface associated unless released by heparin.

ALTERNATIVE PRODUCTS:

Event=Alternative splicing; Named isoforms=3;
                                                                                                                                                                                                                                                                                                                                                                                                   P.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=VEGF-3; Synonyms=VEGF188;
IsoId=Q00731-1; Sequence=Displayed;
Name=VEGF-1; Synonyms=VEGF164;
IsoId=Q00731-2; Sequence=VSP_004626, VSP_004627;
IsoId=Q00731-2; Sequence=VSP_004628;
IsoId=Q00731-3; Sequence=VSP_004628;
IsoId=Q00731-3; Sequence=VSP_004628;
TISSUE SPECIFICITY: In developing embryos, expressed mainly in the choroid plexus, paraventricular neuroepithelium, placenta and kidney glomeruli. Also found in bronchial epithelium, adrenal gland and in seminiferous tubules of testis. High expression of vegF continues in kidney glomeruli and choroid plexus in adults. VegF continues in kidney glomeruli and choroid plexus in adults.
                                                                                                                                                              during embryonic
";
                                   Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                     Genomic
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SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=96216498; PubMed=8632007;
Shima D.T., Kuroki M., Deutsch U., Ng Y., Adamis A.P., D'Amo-
"The mouse gene for vascular endothelial growth factor. Genor
structure, definition of the transcriptional unit, and
characterization of transcriptional and post-transcriptional
                                                                                                                                                                                                                                                  MEDLINE=92355593; PubMed=1644816; Claffey K.P., Wilkison W.O., Spiegelman B.M.; "Vascular endothelial growth factor. Regulation by cell differentiation and activated second messenger pathways. J. Biol. Chem. 267:16317-16322(1992).
                                                                                                           AND VEGF-3)
                                                                                                                                           I growth factor differentiation.
                                                                                                          VEGF-1; VEGF-2
                                                                                                                      MEDLINE=92274860; PubMed=1592003;
Breier G., Albrecht U., Sterrer S., Risau
"Expression of vascular endothelial growth
angiogenesis and endothelial cell differer
Development 114:521-532(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         growth factor.
                                                                                                                                                                                                                                       (ISOFORM VEGF-1).
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                               Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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PIR; B44881; B44881.

HSSP; P15692; 2VPF.

MGD; MGI:103178; Vegfa.

InterPro; IPR000072; PD_g
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EMBL; U41383; -; NOT_A
                  (Wonse)
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                                                                       TaxID=10090;
                    musculus
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                                                  Glycoprotein; Signal; Multigene family.
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/FTId=VSP 004628.
GE -> ER (IN REF. 2).
                                                                                                                                        LINKED (GLCNAC. . .) (PRO -> N (in isoform VEGF-1).
                                                                                                                                                                       isoform VEGF-1)
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Conn G., Bayne M.L., Soderman D.D., Kwok P.W., Sullivan
Palisi T.M., Hope D.A., Thomas K.A.;
"Amino acid and cDNA sequences of a vascular endothelia.
that is homologous to platelet-derived growth factor.";
Proc. Natl. Acad. Sci. U.S.A. 87:2628-2633(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (VEGF-A)
                                                                                                                      SIMILARITY)
SIMILARITY)
                                                                                                                                                                                                                       CRC64;
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Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ISOFORMS VEGF-A188; VEGF-A164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               shii H., Oota I., Takuma T., Inomata K.;
Developmental expression of vascular endothelial
asseter muscle of rats.";
                                                                                                                                                                                                                                            ;
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                                                                                                                                                                                                                         B5540B51E4BB6E17
                                                                                                                                                                                                                                                                                                                                                                                                                                    PIGGIZ; Q9JKX7; Q9QXG6; Q9QXG7;
01-AUG-1990 (Rel. 15, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
Vascular endothelial growth factor A precursor
permeability factor) (VPF).
                                                                                                                                                                                                                                       Score 320.5; DB named No. 4.1e-26
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splicing; BY STMTTY
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/FTId=VSP
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             factor;
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          ProDom; PD001629; PD_growth_fa
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
Mitogen; Angiogenesis; Growth
Heparin-binding; Alternative s
                                              _Growth_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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PDGF;
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PF00341;
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endothelial growth factor.placenta growth factor heterodimer.";

J. Biol. Chem. 270:7717-7723(1995).

- 1- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. It induces endothelial cell prowth. It induces endothelial cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and heparin (By similarity).

- SUBCELLULAR LOCATION: VEGF-A120 is acidic and freely secreted.

VEGF-A164 is more basic, has heparin-binding properties and, although a signicant proportion remains cell-associated, most is freely secreted. VEGF-A188 is very basic; it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rough a collaboration be EMBL outstation - restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Name=VEGF-A164;
IsoId=P16612-2; Sequence=VSP_004629, VSP_004630;

Name=VEGF-A144;
IsoId=P16612-3; Sequence=VSP_004632;

Name=VEGF-A120;
IsoId=P16612-4; Sequence=VSP_004631;
IsoId=P16612-4; Sequence=VSP_004631;

TISSUE SPECIFICITY: Expressed in the pituitary, in brain, i particularly in supraoptic and paraventricular nuclei and t choroid plexus. Also found abundantly in the corpus luteum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family
TISSUE=Glial tumor;
MEDLINE=95221439; PubMed=7706320;
DiSalvo J., Bayne M.L., Conn G., Kwok P.W., Trivedi P.G.,
Soderman D.D., Palisi T.M., Sullivan K.A., Thomas K.A.;
"Purification and characterization of a naturally occurring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Signal;
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K -> N (in isoform VEGF-A164)
/FTId=VSP_004629.
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INTERCHAIN (BY SIMILARITY)
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Comment=Additional isoforms seem to exist;
Name=VEGF-Al88;
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CHAIN 27 214 VENT OF SIGNAL SIGN
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(in isoform VEGF-A164)

Missing (i /FTId=VSP /FTIa=və Missing

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f rats."; 46:77-82(2001)

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isoform VEGF-A120)

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                                                                                                              Gaps
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28-FEB-2003 (Rel. 41, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
Vascular endothelial growth factor A precursor (VEGF-A) (Vascula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. (ISOFORM VEGF189).
MEDLINE=91268072; PubMed=1711045;
Tischer E., Mitchell R., Hartman T., Silva M., Gospodarowicz D., Fiddes J.C., Abraham J.A.;
Fiddes J.C., Abraham J.A.;
"The human gene for vascular endothelial growth factor. Multiple protein forms are encoded through alternative exon splicing.";
J. Biol. Chem. 266:11947-11954(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Q16889; Q96L82; Q96NW5; Q9H1W8; Q9H1W9;
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         Missing (in isoform VEGF-A144)
/FTId=VSP 004632.
V -> A (IN REF. 2; AAF19212).
60FBB876F5304946 CRC64;
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                                                                                Length
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a secreted an
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                                                                                 1;
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                                                                                 Score 319.5; DB :
Pred. No. 5.2e-26
FTIG=VSP 004631
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                                                                                                            Mismatches
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Leung D.W., Cachianes G., Kuang W.-J
"Vascular endothelial growth factor
mitogen.";
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MEDLINE=92168017; PubMed=1791831;
Houck K.A., Ferrara N., Winer J.,
"The vascular endothelial growth ifourth molecular species and chara
                                                                                               Pred
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Keck P.J., Hauser S.D., Krivi G.,
Connolly D.T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=92231879; PubMed=1567395; Weindel K., Marme D., Weich H.A.;
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                                                     25239 MW;
                                                                                            48.1%;
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                                                    214 AA;
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P15692; O60720; C
Q9UH58; Q9UL23;
01-APR-1990 (Rel.
28-FEB-2003 (Rel.
15-MAR-2004 (Rel.
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(VEGF) isoform mRNA
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MEDLINE=97207275; PubMed=9054410;
Poltorak Z., Cohen T., Sivan R., Kandelis Y., Spira G., Vlodavsky I., Keshet E., Neufeld G.;
"VEGF145, a secreted vascular endothelial growth factor isoform that binds to extracellular matrix.";
J. Biol. Chem. 272:7151-7158(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=98119755; PubMed=9450968; Claffey K.P., Shih S.-C., Mullen A., Dziennis S., Cusick J.L., Abrams K.R., Lee S.W., Detmar M.; Identification of a human VPF/VEGF 3' untranslated region mediating hypoxia-induced mRNA stability."; Mol. Biol. Cell 9:469-481(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. (ISOFORM VEGF121).
Sato J.D., Whitney R.G.;
"Human cDNA for vascular endothelial growth factor isoform VEGF121.
Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
express vascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Hererogeneous vascular endothelial growth factor (VEGF) isoform and receptor mRNA expression in human glomeruli, and the identification of VEGF148 mRNA, a novel truncated splice variant. Clin. Sci. 97:303-312(1999).
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Rieder M.J., Armel T.Z., Carrington D.P., Chung M.-W., Lee
Poel C.L., Toth E.J., Yi Q., Nickerson D.A.;
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shan Z.X., Yu X.Y., Lin Q.X., Fu Y.H., Zheng M., Tan H.H., "Cloning and identification of vascular endothelial growth isoform VEGF165.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. (ISOFORM VEGF148).
TISSUE=Renal glomerulus;
MEDLINE=99394945; PubMed=10464055;
Whittle C.J., Gillespie K.M., Harrison R., Mathieson P.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Williams S.;
Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases
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TISSUE=Hemangioendothelioma;
Murata H., Fukushima J., Hattori S., Okuda K., Yanagi H
"Human cDNA for the vascular endothelial growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (VEGF)
"AIDS-associated Kaposi's sarcoma cells in culture
                                                           183:1167-1174 (1992)
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the EMBL/GenBank/DDBJ of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of a new VEGF183.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lei J., Jiang A., Pei D.;
"Identification and characterization of a :
vascular endothelial growth factor: VEGF18
Biochim. Biophys. Acta 1443:400-406(1998).
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TISSUE=Breast;
                                                                                                                                                                                                                                                                                                                                                               (ISOFORM VEGF183)
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Liu J., Peng X., Yuan J., Qiang B.;
"Cloning of vascular endothelial gro
                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. (ISOFORM VEGF1)
TISSUE=Kidney;
MEDLINE=99096474; PubMed=9878851;
                                                               Commun.
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                                factor."
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                              endothelial growth fact
Biochem. Biophys. Res.
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Submitted (
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VEGF-145

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MEDLINE=21320570; PubMed=11427521;
Murphy J.F., Fitzgerald D.J.;
Murphy J.F., Fitzgerald D.J.;
Murphy J.F., Fitzgerald D.J.;
"Vascular endothelial growth factor induces cyclooxygenase-dependent proliferation of endothelial cells via the VEGF-2 receptor.";
FASEB J. 15:1667-1669(2001).
-!- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. It induces endothelial cell prowth. It induces endothelial cell promotes cell migration, inhibits apoptosis, and proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and
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lomain receptor binding site.";
U.S.A. 94:7192-7197(1997).
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                                                                                                                                  PRELIMINARY SEQUENCE OF 27-36; 43-50 AND 59-81.
MEDLINE=90062112; PubMed=2584205;
Connolly D.T., Olander J.V., Heuvelman D., Nelson R., Monsell R., Siegel N., Haymore B.L., Leimgruber R., Feder J.;
"Human vascular permeability factor. Isolation from U937 cells.";
J. Biol. Chem. 264:20017-20024(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF 39-134.
MEDLINE=99119204; PubMed=9922142;
Wiesmann C., Christinger H.W., Cochran A.G., Cunningham B.C.,
Fairbrother W.J., Keenan C.J., Meng G., de Vos A.M.;
"Crystal structure of the complex between VEGF and a receptor-peptide.";
                                                                                                                                                                                                                                                                                                                                                    active human vascular insect cells.";
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growth factor
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                                                                                                                                                                                                                                                                                                                                                                                                                           X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF 34-135.
MEDLINE=97352774; PubMed=9207067;
Muller Y.A., Li B., Christinger H.W., Wells J.A., Cunningham
                    MEDLINE=99165303; PubMed=10067980;
Jingjing L., Xue Y., Agarwal N., Roque R.S.;
"Human Muller cells express VEGF183, a novel spliced variant
vascular endothelial growth factor.";
Invest. Ophthalmol. Vis. Sci. 40:752-759(1999).
                                                                                                                                                                                                                                                                                                               Wilting
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Muller Y.A., Christinger H.W., Keyt B.A., de Vos A.M.;
"The crystal structure of vascular endothelial growth factor
refined to 1.93-A resolution: multiple copy flexibility and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Christinger H.W., Keyt B.A.,
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MEDLINE=93145946; PubMed=7678805;
MEDLINE=7. Tanger B., Schoellmann C., Weindel K.,
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                                                                                                                                                                                                                                                                                                           Fiebich B.L., Jaeger B., Schoellmann C., Kochs G., Marme D., Hug H., Weich H.A.; "Synthesis and assembly of functionally endothelial growth factor homodimers in Eur. J. Biochem. 211:19-26(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          growth factor:
domain recepto:
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Biochemistry 37:17765-17772(1998)
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MEDLINE=98298440; PubMed=9634701;
Fairbrother W.J., Champe M.A., Charovasnik M.A.;
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MEDLINE=97477915; PubMed=9336848
Fairbrother W.J., Champe M.A., Cl
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Structure 6:637-648(1998).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proc. Natl. Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Vascular endothelial mapping of the kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X-RAY CRYSTALLOGRAPHY
TISSUE=Retina;
MEDLINE=99165303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 binding.";
Structure
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                                                                                                                                                                                    79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. It induces endothelial cell promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the vEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and heparin (By similarity).

SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer with PIGF (By similarity).
                                                                                                                                                                                                                                                                        84 GGCCNDEGLECVPTEESNITMQIMRIKPHQGQH-IGEMSFLQHNKCECRPKKDRARQEKK
                                                                                                                                                                                                       SGCCGDEGLHCVALKTANITMOILKIPPNRDPHSYVEMTFSQDVLCECRPILETTKAERR
                                                                                                                                                                                     SQGA-LSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYJADEHPNEVSHIFSPSCVLLSRC
                as heterodimer
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Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Vascular
                                                  freely secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (By
heparin. Neuropilin-1 binds isoforms VEGF-165 and VEGF-148 SUBUNIT: Homodimer, disulfide-linked. Also found as heterowith PlGF (By similarity).

SUBCELLULAR LOCATION: VEGF121 is acidic and freely secreted WEGF165 is more basic, has heparin-binding properties and although a signicant proportion remains cell-associated, recommendations.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family
                                                                                                                   Length 232;
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01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Vascular endothelial growth factor A precursor (VEGF-A)
permeability factor) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the EMBL/GenBank/DDBJ databases
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"PCR cloning of porcine cardiac vascular endothelial
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Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
NCBI_TaxID=9823;
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                                                                                                               th 37.2%; Score 315; DB 1; Similarity 47.7%; Pred. No. 1.7e-25; Conservative 21; Mismatches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=95143284; PubMed=7841203;
Sharma H.S., Tang Z.H., Gho B.C.H., Verdon
"Nucleotide sequence and expression of the
endothelial growth factor.";
Biochim. Biophys. Acta 1260:235-238(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PDGF/VEGF
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Miura N., Misumi K., Kawahara K., Nakashima M., Fukumitsu S.,

Kawabata H., Uto N., Oka T., Maruyama I., Sakamoto H.;

Kawabata H., Uto N., Oka T., Maruyama I., Sakamoto H.;

Cloning of cDNA and high-level expression of equine vascular

endotherial growth factor (VEGF).";

Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: Growth factor active in angiogenesis, and endothelial cell growth. Induces endothelial proliferation and vascular permeability (By similarity).

-!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer with PIGF (By similarity).

-!- SUBCELLULAR LOCATION: Secreted but remains associated to cells to the extracellular matrix unless released by heparin (By similarity).

-!- SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
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                                                                                                                                                                                                                        family.
POTENTIAL.
VASCULAR ENDOTHELIAL GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                     INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
N-LINKED (GLCNAC. . .) (POTENTIAL)
T -> A (IN REF. 2).
                                                                                                                PRINTS; PRO0438; PECYSKNOT.

REMART; PRO0438; PECYSKNOT.

REMART; SM00141; PDGF; 1.

REMART; SM00141; PDGF; 1.

REMART; SM00141; PDGF; 1.

REMART; PS50278; PDGF 1; 1.

REMEMENTAL

REMART; PS60249; PDGF 1; 1.

REMEMENTAL

REMEMENTY; PS702 100

REMEMENTY; 
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Idae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 296.5; DB 1;
Pred. No. 1.1e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           40;
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28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Vascular endothelial growth factor A precurso:
permeability factor) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vert
Mammalia; Eutheria; Perissodactyla; Equidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190 AA
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  EMBL; X81380; CAA57143.1; -.
EMBL; AF318502; AAG33064.1; -.
PIR; S52130; S52130.
HSSP; P15692; 1VGH.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR000072; PD_growth_factor Pfam; PF00341; PDGF; 1.
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62; Conserv
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NCBI TaxID=9796;
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     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
collaboration
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Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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198) to the EMBL/GenBank/DDBJ databases
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SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 294.5; DB 1;
Pred. No. 1.8e-23;
5; Mismatches 42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               growth factor A precursor (VPF).
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INTERCHAIN (BY S
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                                                                                                                                                                                                                                                                                                                                   factor;
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                                                                                                                                                                                                                                                                               Pfam; PF00341; PDGF; 1.
PRINTS; PR00438; GFCYSKNOT.
ProDom; PD001629; PD_growth_fact
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
Mitogen; Angiogenesis; Growth Fact
Multigene family.
                                                                                                                                                                                         EMBL; AB053350; BAB20890.1; -. HSSP; P15692; 1VGH. InterPro; IPR002400; GF_CYSKnot InterPro; IPR000072; PD_growth_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15;
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SEQUENCE OF 60-187 FROM N.A. (ISOFORMS VEGF-190 AND VEGF-166).

SEQUENCE OF 60-187 FROM N.A. (ISOFORMS VEGF-190 AND VEGF-166).

X MEDLINE=95301109; PubMed=7781909;

R Flamme I., Breier G., Risau W.;

T "Vascular endothelial growth factor (VEGF) and VEGF receptor 2

(flk-1) are expressed during vasculogenesis and vascular

differentiation in the quail embryo.";

Dev. Biol. 169:699-712(1995).

-!- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. It induces endothelial cell

proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFRI/Fil-1 and VEGFRI/Kdr receptors and to heparan sulfate and heparin (By similarity).

C -!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer with PlGF (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               collaboration -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VASCULAR ENDOTHELIAL GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IsoId=P52582-3; Sequence=VSP_004635, VSP_004636; Note=Has been shown to exist only in quail so far; ISSUE SPECIFICITY: Abundantly and equally expressed in heliver. In kidney glomeruli, brain and yolk sac, VEGF-166 i 10-times more abundant than VEGF-190. DEVELOPMENTAL STAGE: VEGF-166 is expressed early at day 1 upgraded during gastrulation. Expression of VEGF-190 is defonly from day 2. DOMAIN: VEGF-190 contains a basic insert which acts as a contains a basic insert which acts are contained and acts a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a contener the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
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                                                                         embryonic pattern formati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY: Belongs to the PDGF/VEGF growth factor family
Flamme I., von Reutern M., Drexler H.C., Syed-Ali S., Risau Vaverexpression of vascular endothelial growth factor in the embryo induces hypervascularization and increased vascular permeability without alterations of embryonic pattern formatioev. Biol. 171:399-414 (1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           factor; Glycoprotein; Signal; splicing; Multigene family. BY SIMILARITY.
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004633.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=VEGF-166;
IsoId=P52582-2; Sequence=VSP_004633, VSP_004634;
Note=Has been shown to exist_only in quail so far;
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SIMILARITY)
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Comment=Additional isoforms seem to exist;
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PROSITE; PS50278; PDGF 2; 1.
Mitogen; Angiogenesis; Growth
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ProDom; PD001629; PD
SMART; SM00141; PDGF
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Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=89286596; PubMed=2735925;

Rerrara N., Henzel W.J.;

"Pituitary follicular cells secrete a novel heparin-binding grow factor specific for vascular endothelial cells.";

Biochem. Biophys. Res. Commun. 161:851-858(1989).

-!- FUNCTION: Growth factor active in angiogenesis, vasculogenes endothelial cell growth. It induces endothelial cell promotes cell migration, inhibits apoptosis, induces permeabilization of blood vessels. It binds to the vEGFR1/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate heparin (By similarity).

-!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodi
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               secreted
              F -> L (in isoform \
/FTId=VSP 004635.
Missing (in isoform /FTId=VSP 004636.
                                                                                                                     46;
                                                                                              DB 1;
              (in isoform
SP_004635.
                                                                                                                                                                                                                                                                                                                                                                        01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Vascular endothelial growth factor A precursor
permeability factor) (VPF).
                                                                                                          4.3e - 23
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  /FTId=VSP 004634
                                                                                           Score 291.5;
Pred. No. 4.3e
29; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to the extracellular matrix unless
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               with PlGF (By similarity).
SUBCELLULAR LOCATION: Secreted but
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KSKRGKGKGKRKRKKGRYKPP
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                                                                                           34.5%;
42.3%;
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Science 246:1306-1309(1989)
                                                                                                                       Conservative
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Mammalia; Eutuc.
--'Aae; Bovinae; B
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                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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                                            IsoId=P15691-2; Sequence=VSP_004613, VSP_004614; SIMILARITY: Belongs to the PDGF/VEGF growth factor
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Missing (in isoform Beta)
/FTId=VSP 004613.
R -> K (in isoform Beta).
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K (in isoform Beta)
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No. 2.5e-22;
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splicing; Named isoforms=2
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                       Sequence=Displayed;
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28-FEB-2003 (Rel. 41, Last sequence upda 10-OCT-2003 (Rel. 42, Last annotation up vascular endothelial growth factor A repermeability factor) (VPF).
WEGF OR VEGFA.
                                                                                                                                                to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R -> K (ir
/FTId=VSP
                                                                                                                                                                                                                          HSSP; P15692; 1VGH.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR000072; PD_growth_factor.
Pfam; PF00341; PDGF; 1.
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Pred.
                                                                                                                                                                                                                                                                                   PD_growth_factor;
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                                                                                                                                                                                                                                                                                               SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
Mitogen; Angiogenesis; Growth
Heparin-binding; Alternative s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22310 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33.5%;
46.9%;
                                                                                                                                                                                                                                                                   GECYSKON
                                                                                                                                                                     EMBL; M32976; AAA30502.1;
EMBL; M31836; AAA30804.1;
EMBL; M33750; AAA30805.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                         26
190
127
129
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GPCSERRK 150
 Event=Alternative
                       IsoId=P15691-1;
                                                                                                                                                                                           ; M33750; AAA308
A33787; A33787.
B40080; B40080.
                                                                                                                                                                                                                                                            Pfam; PF00341; PDGi
PRINTS; PR00438; Gi
ProDom; PD001629; E
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                                                                                                                                                  or send an email
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            Name=Alpha
                                   Name=Beta
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DISULFID
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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PIR;
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                                                                                                                                     SEQUENCE FROM N.A.

TISSUE=Decidua, and Embryo;

X MEDLINE=99311285; PubMed=10382276;

X Yi X.J., Jiang H.Y., Lee K.K., Tang P.L., Chow P.H.;

"Expression of vascular endothelial growth factor (VEGF) and its receptors during embryonic implantation in the golden hamster (Mesocricetus auratus).";

Cell Tissue Res. 296:339-349(1999).

Cell Tissue Res. 296:339-349(1999).

-:- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. It induces endothelial cell prowth. It induces endothelial cell prowth. It induces endothelial cell prowth. It induces endothelial cell cell induces permeabilization of blood vessels. It binds to the vertex permeabilization of blood vessels. It binds to the vegres permeabilization of blood vessels. It binds to the vegres permeabilization; inhibits and the heparin (By similarity).

-:- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer; with PIGF (By similarity).

-:- SUBCELULAR LOCATION: Secreted but remains associated to cells or the extracellular matrix unless released by heparin (By the control of the control o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEHPNEVSHIFSPSCVLLSRCS
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VASCULAR ENDOTHELIAL GROWTH FACTOR A.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

INTERCHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).
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Euteleostomi; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
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PRINTS; PR00438; GFCYSKNOT.
PRINTS; PR00438; GFCYSKNOT.
ProDom; PD001629; PD growth factor; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal Heparin-binding; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
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F00C5A8EA79A465F CRC64
   Craniata; Vertebrata; E
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33.4%; Score 282.5; DB 1;
46.1%; Pred. No. 3.2e-22;
cive 16; Mismatches 44;
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HSSP; P15692; 1VGH.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR00072; PD_growth_factor.
Pfam; PF00341; PDGF; 1.
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       Chordata;
Rodentia;
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     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
59; Conserv
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                                                                                                               TaxID=10036;
                                                                        Mesocricetus
NCBI_TaxID=1
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CARBOHYD
SEQUENCE
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TESSUE-Kidney;

X MEDLINE=97117958; PubMed=8958842;

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K.,

Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith Flore Forge Love Forger Forg
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commercial
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                                                                                                                                                                                                     Chordata; Craniata; Vertebrata; Euteleostomi;
Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď
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                                                                                                                            (Vascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a colbetween the Swiss Institute of Bioinformatics and the EMBL out the European Bioinformatics Institute. There are no restrictic use by non-profit institutions as long as its content is imposified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.chor send an email to license@isb-sib.ch).
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VASCULAR ENDOTHELIAL GROWTH FACTO
BY SIMILARITY.
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2.7e-22;
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                                                                                                 growth factor A precursor (VPF).
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Pred. No. 2.7e-
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                                                                                update)
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                 PRT; 14:
01-0CT-1996 (Rel. 34, Created)
10-0CT-2003 (Rel. 42, Last sequence upda
Vascular endothelial growth factor permeability factor) (vrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; X89506; CAA61677.1; -.
PIR; S57956; S57956.
HSSP; P15692; 1VPP.
InterPro; IPR002400; GF cysknot.
InterPro; IPR000072; PD_growth_fact
Pfam; PF00341; PDGF; 1.
PRINTS; PR00438; GFCYSKNOT.
ProDom; PD001629; PD_growth_factor; SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
Mitogen; Angiogenesis; Growth factor Heparin-binding; Multigene family.
SIGNAL 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33.3%;
                                                                                                                                                                                                                                             Ovis.
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93
127
129
76
100
                                                                                                                                                                                          Cous aries (Sneep).
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                            cbi_TaxID=9940;
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58; Conserv
                                                                                                                                                                                Ovis aries (Sheep)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Æ;
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51
82
86
76
100
146 7
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DISULFID
DISULFID
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                               Bovidae;
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Best Local
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SHEEP
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Matches
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  140
                              133
GCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFSQDVLCECRPILETTKAERK
                              줐
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                                                                                                                                                                                                                                                                                                                                                                                Berse B.;
Submitted (JAN-1992) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: Growth factor active in angiogenesis, and endothelial cell growth. Induces endothelial proliferation and vascular permeability (By similarity).
-!- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer with PIGF (By similarity).
                                                                                                                                                                                                                                                                             Cavia porcellus (Guinea pig).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: Secreted but remains associated to c to the extracellular matrix unless released by heparin (By similarity).
SIMILARITY: Belongs to the PDGF/VEGF growth factor family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      164;
               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                     (Vascular
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INTERCHAIN (BY SIMILARITY)
N-LINKED (GLCNAC. . ) (PO'
9EB86A81A9D5DCA4 CRC64;
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50.0%; Pred. No. 4.4e-22;
ive 15; Mismatches 33
                                                                                                                                                             va-muG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Vascular endothelial growth factor A (VEGF-A)
factor) (VPF).
VEGF OR VEGFA.
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SIMILARITY.
SIMILARITY.
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HSSP; P15692; 1VGH.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR000072; PD_growth_falpfam; PF00341; PDGF; 1.
PRINTS; PR00438; GFCYSKNOT.
ProDom; PD001629; PD_growth_factorsMART; SM00141; PDGF; 1.
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BY
BY
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57; Conser
                                                                                                                                                                                                                                                                                                                                                         N.A
                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Bile duct;
                                                                                                                                                                                                                                                                                                                           NCBI TaxID=10141;
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81
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DISULFID
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CARBOHYD
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Best Local
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3

Gaps

10

Indels

44;

20;

Conservative

80

VLLSRCS

21 SQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEHPNEVSHIFSPSC

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83

VPLMRCG

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Пр

Search completed: September 13, 2004, 09:51:24 Job time : 24 secs

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5.1.6
Compugen Ltd
version
- 2004
GenCore (c) 1993
        Copyright
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using sw model protein search, OM protein

ß (without alignments)
429.758 Million cell update 09:44:09 2004, September 13, Run on:

es/sec

US-10-071-370A-4

846 Title: Perfect score:

1 MLAMKLFTCFLQVLAGLAVH......RKTKGKRKQSKTPQTEEPHL Sequence:

Scoring table:

residues 1017041 segs, 315518202 BLOSUM62 Gapop 10.0 , Gapext 0.5 Searched:

1017041 Total number of hits satisfying chosen parameters:

2000000000 seq length: seq length: Minimum DB Maximum DB

0% 100% 45 summaries Post-processing: Minimum Match Maximum Match Listing first

SPTREMBL Database

sp\_archea:\*
sp\_bacteria:\*
sp\_fungi:\*
sp\_human:\*
sp\_invertebrate:\*
sp\_mammal:\*
sp\_mhc:\*
sp\_organelle:\* sp\_phage:\*  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

sp plant:\*
sp rodent:\*
sp virus:\*
sp vertebrate:\*
sp unclassified:
sp rvirus:\*
sp bacteriap:\*

sp\_archeap:

#### SUMMARIES

		cri	ovis a	Q951q4 felis silve	1 rattus	muste	homo	homo	_	Q9qx39 spalax leuc		Q8spz9 sus scrofa	Q8spl5 equus cabal		077643 ovis aries	Q866g4 oryctolagus	brac	Q9mzb1 ovis aries
COLVENIOS		ID	Q8HY75	Q95LQ4	Q91ZE1	Q8HY70	Q96KJ0	Q96L82	Q95NES	09QX39	Q9BDP7	Q8SPZ9	Q8SPL5	Q8WMQ4	077643	Q866G4	073822	Q9MZB1
		DB	9	9	11	9	4	4	9	11	9	9	9	9	9	ø	13	9
		Length	108	189	190	184	191	191	191	190	126	124	128	127	190	120	144	118
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Oggkoo callithrix O73682 brachydanio O42572 xenopus lae O42571 xenopus lae O90x23 bothrops ja O90x23 bothrops in O70123 mus musculu O88911 rattus norv Q9n1s1 capreolus c O18843 oryctolagus Q9n1s2 capreolus c O97500 oryctolagus O80ge8 orf virus. O80ua0 mus musculu O87571 pseudocowpo O8tev2 homo sapien O8tev2 homo sapien O8min0 capra hircu O91ze4 rattus norv O8min1 capra hircu O91ze3 rattus norv	1zh6 meriones qgd7 gallus ga s50 bos taurus 1x1 drosophila wp6 drosophila
13682 2572 2572 2571 2571 2571 20023 10024 10123 1151 1152 1152 1152 1152 1152 1152 1	SSO WP6
Q9GK0C 07368 04257 04257 09257 090X2 000X2	200 200 200 200 200 200 200 200 200 200
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274.5 274.5 273.5 273.5 254.5 254.5 208.5 200.5 191.5 188 180.5 158.5 153.5	14 WW · ·
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## ALIGNMENTS

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                                                                                                                                    Galan H.L.
                                                                                                                                                    in a model (PI-IUGR).
         Q8HY75

Q8HY75;
Q8HY75;
Q1-MAR-2003 (TrEMBLrel. 23, Last sequence update)
Q1-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Q1-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Q1-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Q1-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Blacental growth factor (Fragment).
Qvis aries (Sheep).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Caprinae; Ovis.
NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                          1;
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                                                                                                                                                                                                                                                                         F2BC426137AC4CFC CRC64;
                                                                                                                                                                                                                                                                                        DB 6;
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                                                                                                                                                                                                                                                                          12634 MW;
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Best Local S
Matches 57
Q8HY75
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STRAIN=Sprague-Dawley;
Marion S., Lee T.-C.;
"Cloning of multiple VEGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
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PS50278; PDGF 2
184 184
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Submitted (OCT-2002) to
EMBL; AY158156; AAN7636E
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Local Similarity
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Koga L., Kobayashi Y., Yazawa M., Masuda K., Ohno K., Tsujimoto H.;

Koga L., Kobayashi Y., Yazawa M., Masuda K., Ohno K., Tsujimoto H.;

Tyuchth factor.";

Submitted (SEP-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AB071947; BAB68520.1; ...

GO; GO:0008083; F:growth factor activity; IEA.

GO; GO:0008151; P:cell growth and/or maintenance; IEA.

GO; GO:0008151; P:cell growth and/or maintenance; IEA.

InterPro; IPR002400; GF_cysknot.

DR PINTS; PR00441; PDGF; 1.

PRINTS; PR00441; PDGF; 1.

BRINTS; PR00141; PDGF; 1.

PROSITE; PS00249; PDGF; 1.

ROOSON; PR00141; PDGF; 1.

ROOSON; PR00141; PDGF; 1.

ROOSITE; PS00249; PDGF; 1.
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                 |: |:|||
|CMPLETAN
     CVALKTAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                 Euteleostomi;
Felis.
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SQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEHPNEVSHIFSPSC
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                                                                Length
                                                     13
                                                                                                                                                              01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Vascular endothelial growth factor.
Felis silvestris catus (Cat).
Felis silvestris catus (Cat).
Kukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Felidae;
                                                 ITMQILKIPPNRDPHSYVEMTFSQDVLCECRPILETTKAER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 300; DB Pred. No. 1e-2015; Mismatches
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Last sequence up
Last annotation
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Q91ZE1;
Q91ZE1;
01-DEC-2001 (TrEMBLrel. 19, C
01-JUN-2003 (TrEMBLrel. 19, L
Vascular endothelial growth f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35.5%;
                                                                                                                                        PRELIMINARY;
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63; Conserv
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SEQUENCE FROM N.A
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PCSERRK
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                                                                                                                                                    Q95LQ4;
01-DEC-2001
01-DEC-2001
01-JUN-2003
                                                 98
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SQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEHPNEVSHIFSPSCVLLSRCS
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Q8HY70;
O1-MAR-2003 (TrEMBLrel. 23, Last sequence update)
O1-MAR-2003 (TrEMBLrel. 25, Last annotation update)
O1-OCT-2003 (TrEMBLrel 25, Last annotation update)
Vascular endothelial growth factor A (Fragment).
Wastela vison (American mink).
Mustela vison (American mink).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Mustelidae; Mustelinae;
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implantation in
    from hypoxic neonatal
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                                            the EMBL/GenBank/DDBJ databases.
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              cardiomyocytes.";
Submitted (APR-2001) to the EMBL/GenBank/DDBJ data
EMBL; AY033506; AAL07526.1; -.
PIR; A35987; A35987.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008151; P:cell growth and/or maintenance;
InterPro; IPR002400; GF_cysknot.
InterPro; IPR000072; PD_growth_factor.
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Pred. No. 1.2e-26;
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     variants
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No. 3.4
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ProDom; PD001629; PD_growth_facismant; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
SEQUENCE 190 AA; 22396 MW;
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Sugiono M., Winkler M., Gillatt D., Harper S.J., Bates D.O.;
I. A new isoform of vascular endothelial growth factor mRNA is down-regulated in renal tumors.";
I. (In) Unknown A. (eds.);
I. (In) Unknown A. (eds.);
I. Proceedings of the 7th World Congress on Microcirculation, pp.3-3, Sydney, Australia (2001).
I. EMBL; AF430806; AAL27435.1;
I. EMBL; AF430806; AAL27435.1;
I. GO; GO:0016020; C:membrane; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008151; P:cell growth and/or maintenance; IEA.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR00072; PD_growth_factor.
InterPro; IPR00072; PD_growth_factor.
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Indels
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                                                                                                                                                                                                                                     01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Vascular endothelial growth factor 165b.
Homo sapiens (Human).
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Last sequence update)
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  41;
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Pred. No. 4.1e-26
9; Mismatches 3
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   Mismatches
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   16;
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PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
SEQUENCE 191 AA; 22258 MW;
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ProDom; PD001629; PD_growt
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62; Conservative
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Q96L82;
01-DEC-2001
01-DEC-2001
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Q96KJ0;
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factor
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SIMVEGF165.
Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi
Eukaryota; Metazoa; Chordata; Catarrhini; Cercopithecidae;
                                                          Euteleostomi
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                                                                                                                                                                                                             Fu Y.H., Zheng M., Tan H.H., vascular endothelial growth
                                         Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
NCBI_TaxID=9606;
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databases.
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EMBL; AY047581; AAM03108.1; -.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008151; P:cell growth and/or maintenance; IEA.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR000072; PD_growth_factor.
Pfam; PF00341; PDGF; 1.
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Last annotation update)
      Last annotation update) factor isoform VEGF165.
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MEDLINE=96245208; PubMed=8641836;
Shima D.T., Gougos A., Miller J.W., Tolentino M., Adamis A.P., D'Amore P.A.;
"Cloning and mRNA expression of vascular endotheli ischemic retinas of Macaca fascicularis.";
Invest. Ophthalmol. Vis. Sci. 37:1334-1340(1996).
EMBL; S82167; AAB47118.1; -.
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39;
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Pred. No. 4.1e-26,
9; Mismatches 33
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y of vascular endothelial growth factor
ad (JUL-2001) to the EMBL/GenBank/DDBJ o
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PRINTS; PRO0438; GFCYSKNU1.
PRODOM; PD001629; PD growth fact
PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
PROSITE; PS50278; PDGF 2; 1.
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Shan Z.X., Yu X.Y., Lin Q.X., F
"Cloning and identification of
isoform VEGF165.";
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Similarity 47.3%;
61; Conservative 15
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(TrEMBLrel. 19,
(TrEMBLrel. 24,
v1-OCT-2003 (TrEMBLrel. 25,
Vascular endothelial growth
VEGF.
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Mammalia; Eutheria; Prii
Cercopithecinae; Macaca
NCBI_TaxID=9541;
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"Cloning of
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QDVLCECRPILETTK-
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126 AA;
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57; Conser
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Q8SPZ9
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                                                                                                                                                                                                                                     84 GGCCNDEGLECVPTEESNITMQIMRIKPHQGQH-IGEMSFLQHNKCECRPKKDRARQENP
                                                                                                                                                                                SCVLLSRC
                                                                                                                                                                                                       SCVPLMRC
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                                                                                                                                                                                                                         SGCCGDEGLHCVALKTANITMOILKIPPNRDPHSYVEMTFSQDVLCECRPILETTK---
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                                                                                                                                                                                                                                                                                                                                                                                                                          Spalax leucodon ehrenbergi (Ehrenberg's mole rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Spalacinae;
Nannospalax.
NCBI_TaxID=30637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=99313148; PubMed=10386577;

MEDLINE=99313148; PubMed=10386577;

Avivi A., Resnick M.B., Nevo E., Joel A., Levy A.P.;

Avivi A., Resnick M.B., Nevo E., Joel A., Levy A.P.;

Adaptive hypoxic tolerance in the subterranean mole rat Spalax

Fress Lett. 452:133-140(1999).

EMBL; AF186236; AAD56245.1; -.

RASP; P49763; IFZV.

GO; GO:0008083; F:growth factor activity; IEA.

GO; GO:0008151; P:cell growth and/or maintenance; IEA.

InterPro; IPR002400; GF_cysknot.

InterPro; IPR000072; PD_growth_factor.
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                                                                                                              CCE57097DD3779BD CRC64;
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GO; GO:0016020; C:membrane; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008151; P:cell growth and/or maintenance; IEA
InterPro; IPR002400; GF_cysknot.
InterPro; IPR000072; PD_growth_factor.
Pfam; PF00341; PDGF; 1.
PRINTS; PR00438; GFCYSKNOT.
                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11;
                                                                                                                                  ore 295; DB 6; I
ed. No. 4.1e-26;
Mismatches 39;
                                                                                                                                                                                                                                                                                                                                                                                 update)
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Pred. No. 4.6e-26;
1; Mismatches 53;
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                                                                               Н
                                                                         Prodom; PD001629; PD growth factor; PROSITE; PS00249; PDGF 1; 1. PROSITE; PS50278; PDGF 2; 1. SEQUENCE 191 AA; 22314 MW; CCEST
                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                     Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                factor;
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                                                                                                                                              Pred
                                                                                                                                                         19;
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                                                                                                                                 34.9%; silarity 47.3%; EConservative 19;
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Similarity 43.9%;
65; Conservative 2
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ProDom; PD001629; PD_growth_SMART; SM00141; PDGF; 1.
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PROSITE; PS50278; PDGF 2; 1
SEQUENCE 190 AA; 22488 MI
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Matches 65
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Q9QX39;
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Matches
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                      61 HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFS
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Sus.
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                                                                                                                                                                                                                                                    01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Vascular endothelial growth factor (Fragment).
Macaca mulatta (Rhesus macaque).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutelemammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
NCBI_TaxID=9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hazzard T.M., Nayak N.R., Jia Y., Stouffer R.L.;
"Rhesus macaque VEGF mRNA sequence.";
Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases
EMBL; AF339737; AAK26379.1; -.
HSSP; P49763; 1FZV.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008151; P:cell growth and/or maintenance; IEA.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR000072; PD_growth_factor.
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01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Vascular endothelial growth factor (Fragment).
Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
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51.8%; Pred. No. 9.5e-26;
ive 16; Mismatches 35
                                                                                                                                                                                                                             126 AA
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                                                                              -AERRK 140
                                                                                                                 CHNRCECRPKKDRTRLENHCEPCSERRK 150
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PRINTS; PR00438; GFCYSKNOT.

ProDom; PD001629; PD_growth_factor; 1.

SMART; SM00141; PDGF; 1.

PROSITE; PS00249; PDGF_1; 1.

PROSITE; PS50278; PDGF_2; 1.

NON_TER 126 126
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SEQUENCE FROM N.A.
TISSUE=Myocardium;
Yuan H., Li J.;
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3CVPTE
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Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
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myocardi
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Welter H., Bollwein H., Einspanier R.;
"Expression of horse endometrium.";
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases
 collateral-dependent
                         databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                        2E1C1A009E67C9C9 CRC64;
                                                                                                                                                                                                                                                                                                         TANITMOILKIPPNRDPHSYVEMTFSQDVLCECRPILETTK---
                                                                      IEA
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01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Vascular endothelial growth factor (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AJ439887; CAD29178.1; -. GO; GO:0016020; C:membrane; IEA. GO; GO:0008083; F:growth factor activity; IEA. GO; GO:0008151; P:cell growth and/or maintenance; InterPro; IPR002400; GF cysknot. InterPro; IPR000072; PD growth factor. Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 6;
                                             GO, GO:0016020; C:membrane; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008151; P:cell growth and/or maintenance;
InterPro; IPR002400; GF cysknot.
InterPro; IPR000072; PD growth factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34.1%; Score 288.5; DB 6; 50.9%; Pred. No. 1.4e-25; ive 15; Mismatches 32;
                                                                                                                                                                                                              34.1%; Score 288.5; DB 6; 50.9%; Pred. No. 1.4e-25; ive 16; Mismatches 31;
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          exercise training.";
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ
EMBL; AF461807; AAL85286.1; -.
                                                                                                                                                                                                                                                                                                                                                                                           128 AA
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  VEGF in porcine
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ProDom; PD001629; PD growth.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                    PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
NON TER 124 124
                                                                                                                 PRINTS; PR00438; GFCYSKNOT.
ProDom; PD001629; PD_growth_
SMART; SM00141; PDGF; 1.
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  o£
                                                                                                                                                                                        124 AA;
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     expression
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Q8SPL5;
01-JUN-2002
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Best Local S
Matches 58
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea
                                                                                                                                                                                                                                                                                                                                                    Euteleostomi
Sus.
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Cheung C.Y., Brace R.A.;
"Ovine vascular endothelial growth factor: Nucleotide sequence
expression in fetal tissues.";
                            61 EFNITMQIMRIKPHQSQH-IGEMSFLQHSKCECRPKKDKARQENPCGPCSERRK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IEA
                                                                                                                                                                                                                                                                                                                                                           Vertebrata;
Ina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
factor.
                                                                                                                                                                                                                                01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Vascular endothelial growth factor (Fragment).
Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
  TANITMOILKI PPNRDPHSYVEMTFSQDVLCECRPILETTK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AY072734; AAL68393.1; -.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0008083; F:growth factor activity; IEA.
GO; GO:0008151; P:cell growth and/or maintenance;
InterPro; IPR002400; GF_cysknot.
InterPro; IPR000072; PD_growth_factor.
Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 287.5; DB 6;
Pred. No. 1.9e-25;
B; Mismatches 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
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PRINTS; PR00438; GFCYSKNO1.
ProDom; PD001629; PD_growth_fasMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14920 MW;
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                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VEGF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       training.";
d (JAN-2002)
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54; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lae; Caprinae;
TaxID=9940;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            expression of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUE=Myocardium;
Yuan H., Li J.;
                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Euther
NCBI_TaxID=9823;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             077643;
077643;
01-NOV-1998
01-NOV-1998
                                                                                                                                                                                                       OBWMO4;
01-MAR-2002
01-MAR-2002
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exercise to Submitted
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NCBI_Tax1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NON TER
SEQUENCE
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       95
                                                                                                                                                                                      Q8WMQ4
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Clausen I., Kietz S., Fischer B.;

"Transcriptional changes in rabbit preimplantation blastocysts upon exposure to polychlorinated biphenyls.";

Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AX196796; AAO42518.1; -.

GO; GO: 00080815; F: growth factor activity; IEA.

GO; GO: 00080815; P: cell growth and/or maintenance; IEA.

InterPro; IPR002400; GF_cysknot.

R InterPro; IPR000072; PD_growth_factor.

R PRINTS; PR00441; PDGF; 1.

R PRODOM; PD001629; PD_growth_factor; 1.

R SMART; SM00141; PDGF; 1.

R PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                   SQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEHPNEVSHIFSPSCVLLSRCS
                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                     GCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFSQDVLCECRPILETTK--
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Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
NCBI TaxID=9986;
                                                                                                                                                                                                                    Length 190;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 120;
     EMBL; AF071015; AAC23608.1; -.

HSSP; P49763; 1FZV.

GO; GO:0016020; C:membrane; IEA.

GO; GO:0008151; P:cell growth and/or maintenance; IEA.

InterPro; IPR002400; GF_cysknot.

InterPro; IPR002400; GF_cysknot.

InterPro; IPR00072; PD_growth_factor.

Pfam; PF00341; PDGF; 1.

PRINTS; PR00438; GFCYSKNOT.

ProDom; PD001629; PD_growth_factor; 1.

RMART; SM00141; PDGF; 1.

PROSITE; PS00249; PDGF 1; 1.

PROSITE; PS50278; PDGF 2; 1.

SEQUENCE 190 AA; 22342 MW; 0D5E3B3E5C53E739 CRC64;
                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E563C54980DCE1E8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          el. 24, Last sequence update)
el. 25, Last annotation update)
growth factor (Fragment).
                                                                                                                                                                                                               Score 280.5; DB 6;
Pred. No. 2e-24;
7; Mismatches 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32.9%; Score 278; DB 6; larity 52.3%; Pred. No. 2.3e-24; Conservative 15; Mismatches 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. 24, C
(TrEMBLrel. 24, I
(TrEMBLrel. 25, I
                                                                                                                                                                                                              Query Match
Best Local Similarity 46.1%;
Matches 59; Conservative 1
0:0-0(1998).
AAC23608.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY
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120 AA;
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01-JUN-2003
01-JUN-2003
01-OCT-2003
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Best Local S
Matches 58
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SQGALSA - - GNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEHPNEVSHIFSP

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Liang D., Ge R.;
"Vascular endothelial growth factor 121 isoform from zebrafish, Danio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 LAMKLFTCFLQVLAGLAVHSQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63 PDEIEHTYIPSCVVLMRCAGCCNDEALECVPTETRNVTMEVLRVKQRVSQHNF-QLSFTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Danio rerio).; Craniata; Vertebrata; Euteleostomi; Teleostei; Ostariophysi; Cypriniformes;
                                           129
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 144;
                                                     CSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYVEMTFSQDVLCECRP
                                                                                                                                                                                                                                                                                                                                  EMBL; AF059661; AAC14713.1; -.

RSSP; P49763; 1FZV.

R ZFIN; ZDB-GENE-990415-273; vegf.

GO; GO:0016020; C:membrane; IEA.

GO; GO:0008083; F:growth factor activity; IEA.

GO; GO:0008151; P:cell growth and/or maintenance; IEA.

InterPro; IPR00072; PD_growth_factor.

InterPro; IPR00072; PD_growth_factor.

Pfam; PF00341; PDGF; 1.

PRINTS; PR00438; GFCYSKNOT.

ProDom; PD001629; PD_growth factor.

SMART; SMON141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
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                                                                                                                                                                       01-AUG-1998 (TrEMBLrel. 07, Last sequence update) 01-JUN-2003 (TrEMBLrel. 24, Last annotation update) Vascular endothelial growth factor 121 isoform.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 276.5; DB 13;
Pred. No. 4.2e-24;
35; Mismatches 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           152
                                                                                                                                    144 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 DVLCECRPILETTKAERRKTKGKRKQSKTPQ
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                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35;
                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                          rerio (Zebrafish)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
SEQUENCE 144 AA; 16479 MW;
                                                                                                                                                        (TrEMBLrel. 07, (TrEMBLrel. 07, ITEMBLrel. 24, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32.7%;
35.1%;
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                                                                                                                                 PRELIMINARY;
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53; Conserv
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01-AUG-1998
01-JUN-2003
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073822;
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                                                                                                       RESULT 15
073822
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GenCore version 5.1.6
(c) 1993 - 2004 Compugen Ltd.
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using sw model - protein search, OM protein

September 13, 2004, 09:45:39 ; Search time 39 Seconds (without alignments) 389.699 Million cell update Run on:

es/sec

158

US-10-071-370A-4 846 1 MLAMKLFTCFLQVLAGLAVH.....RKTKGKRKQSKTPQTEEPHL Title:

score: Sequence: Perfect

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283366 segs, 96191526 residues Searched:

283366 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Listing

Database

PIR 78:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\* ч си се ф

a cinted, Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being prand is derived by analysis of the total score distribution.

#### SUMMARIES

	Description	placental growt	lacental growth	scular endothel	scular endothel	ascular endothel	lioma-derived va	scular endothel	scular endotne	vine vascular e	ascular endothe	cular endotne	scular endothe	ascular endothe	ascular endothe	K vas	ascular endothe	latelet-derived	latelet-derived	let-derived	latelet-derived	DGF-related tra	DGF-related tran	latelet-derived	atelet-derived	latelet-derived	latelet-derived	atelet-derived	pinal cord-deriv	lacelec-derived
	Ĥ	5612	123	488	155	488	598	213	008	795	378	125	1953	7467	3468	1953	592	2505	FMS(	VCT	FHU	VMV		250	FHU	082	488	151550	C75	C19
	щ	2																										7		
	engt]	158	149	214	232	190	190	190	190	146	120	128	133	207	188	148	419	225	241	245	241	226	271	197	211	215	196	226	370	370
ο <b>λ</b> τ	ch Ch	100.0	56.	•	•	•	•	•	•	•	_:		_				~	~	. ~	· ~	N	-		0	0	0	0	ക	9.8	9.7
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RESULT 2
A41236
placental growth factor precursor - human
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 19-Jun-1992 #sequence\_revision 19-Jun-1992 #text\_change 05-Nov-1999
C;Accession: A41236
R;Maglione, D.; Guerriero, V.; Viglietto, G.; Delli-Bovi, P.; Persico, M.G
R;Maglione, D.; Guerriero, V.; Viglietto, G.; Delli-Bovi, P.; Persico, M.G
Proc. Natl. Acad. Sci. U.S.A. 88, 9267-9271, 1991
A;Title: Isolation of a human placenta cDNA coding for a protein related to
A;Reference number: A41236; MUD:92021031; PMID:1924389
A;Recession: A41236
A;Accession: A41236
A;Cross-references: GB:X54936; NID:g35521; PIDN:CAA38698.1; PID:g35522
C;Genetics:
A;Gene: GDB:PGF
A;Cross-references: GDB:134676; OMIM:601121

change 05-Nov-1999

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                          05-Nov-1999
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A; Status: preliminary; not compared with conceptual translation
A; Molecule type: mRNA
A; Residues: 1-158 < DIS>
A; Cross-references: GB: L40030; NID: g1263413; PIDN: AAA97426.1; PID: g1263414
C; Keywords: glycoprotein
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Pred. No. 4.4e-78;
; Mismatches 0;
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 19-Oct-1995 #sequence_revision 19-Oct-1995
C;Accession: A56125
R;DiSalvo, J.; Bayne, M.L.; Conn, G.; Kwok, P.W.; T
J. Biol. Chem. 270, 7717-7723, 1995
A;Title: Purification and characterization of a nat
A;Reference number: A56125; MUID:95221439; PMID:770
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Local Similarity 100.0%;
nes 158; Conservative 0;
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Matches 158
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Vascular endothelial growth factor-3 precursor - mouse

NyContains: vascular endothelial growth factor-2; vascular permeability,
C; Species: Mus musculus (house mouse)
C; Species: Mus musculus (house mouse)
C; Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 08-Oct.
C; Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 08-Oct.
C; Accession: A44881; A60932; S52136
Development 114, 521-532, 1992
A; Title: Expression of vascular endothelial growth factor during embryc
A; Reference number: A44881; MUD:92274860; PMID:1592003
A; Residues: 1-214 < RRE>
A; Residues: 1-214 < RRE>
A; Residues: 1-214 < RRE>
A; Molecule type: mRNA
A; Residues: 1-214 < RRE>
A; Molecule type: mRNA
A; Residues: 1-140, 209-214 < RR2>
A; Molecule type: mRNA
A; Residues: 1-140, 209-214 < RR2>
A; Molecule type: mRNA
A; Residues: 1-140, 209-214 < RR2>
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A; Molecule type: mRNA
A; Residues: 1-140, 209-214 < RR2>
A; Molecule type: mRNA
A; Residues: 1-140, 209-214 < RR2>
A; Molecule type: mRNA
A; Residues: 1-140, 209-214 < RR2>
A; Molecule type: protein
A; Residues: 27-33 < CLAA
B; Reference number: A60932; MuID:91079755; PMID:2258694
A; Richer number: S52136; MuID:95101726; PMID:3803491
A; Residues: 27-33 < CLAA
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A; Status: preliminary
A; Molecule type: protein
A; Residues: 27-46 <SUG>
C; Comment: Homodimers could be demonstrated for recombinant VEGF
C; Comment: Homodimers could be demonstrated for secondinative splicing; angiogenesis; disulfide bond;
C; Keywords: alternative splicing; angiogenesis; disulfide bond;
F; 1-26/Domain: signal sequence #status predicted <SIG>
F; 27-214/Product: vascular endothelial growth factor-3 #status e
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Pred. No. 7.5e-25;
0; Mismatches 46;
                                              Score 474.5; DB;
Pred. No. 1.4e-40;
9; Mismatches 27
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C; Species: Homo sapiens (man)
C; Date: 28-Aug-1992 #sequence revision 28-Aug-1992 #text change 05-Nov-1999 C; Accession: A41551; E41551; A40454; B40454; C40454; A40079; A40080; R; Houck, K.A.; Ferrara, N.; Winer, J.; Cachianes, G.; Li, B.; Leung, D.W. Mol. Endocrinol. 5, 1806-1814, 1991
A; Title: The vascular endothelial growth factor family: identification of a faither review of a faither review of the control of a faither review of the control of a faither review of the control of the co
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A. Ancession: A41551
A. Ancession: A41551
A. Ancession: A41551
A. Accession: C41551
A. Ancession: B415 A. A
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A;Experimental source: AIDS-Kaposi's sarcoma cell
A;Accession: JQ1464
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: GB:X81380; NID:g587559; PIDN:CAA57143.1; PID:g587560
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A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-190 < CON>
A; Residues: 1-190 < CON>
A; Cross-references: GB: M32167; NID: g204287; PIDN: AA41211.1; PID: g20428
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    disulfide bond;
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C; Accession: A35987
R; Conn, G.; Bayne, M.L.; Soderman, D.D.; Kwok, P.W.; Sullivan, K. Proc. Natl. Acad. Sci. U.S.A. 87, 2628-2632, 1990
A; Title: Amino acid and cDNA sequences of a vascular endothelial A; Reference number: A35987; MUID: 90207249; PMID: 2320579
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C; Species: Sus scrofa domestica (domestic pig)
C; Date: 14-Jul-1995 #sequence_revision 21-Jul-1995 #text_chang
C; Date: 14-Jul-1995 #sequence_revision 21-Jul-1995 #text_chang
C; Accession: S52130
R; Sharma, H.S.; Tang, Z.H.; Gho, B.C.G.; Verdouw, P.D.
B; Sharma, H.S.; Tang, Z.H.; Gho, B.C.G.; Verdouw, P.D.
B; Sharma, H.S.; Tang, Z.H.; Gho, B.C.G.; Verdouw, P.D.
A; Title: Nucleotide sequence and expression of the porcine vas A; Reference number: S52130; MUID:95143284; PMID:7841203
A; Accession: S52130
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-190 <SHA>
A; Cross-references: GB:X81380; NID:9587559; PIDN.Craaction
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A35987
glioma-derived vascular endothelial cell growth factor -
C;Species: Rattus norvegicus (Norway rat)
C;Date: 16-Nov-1990 #sequence_revision 16-Nov-1990 #text_
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       angiogenesis; dimer;
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larity 47.7%; Pred. No. 8.7e-23;
Conservative 18; Mismatches 40;
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                                                       Score 300.5; DB 3
Pred. No. 6.9e-23
3; Mismatches 4
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               splicing;
                                                         th 35.5%; Similarity 47.7%; 61; Conservative
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Best Local Similarity 48.4
Matches 62; Conservative
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61; Conserv
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Best Local
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                         A; Molecule type: mRNA
A; Residues: 1-140, 'N', 227-232 < wE2>
A; Residues: 1-140, 'N', 227-232 < wE2>
A; Residues: 1-140, 'N', 27-232 < wE2>
A; Experimental source: AIDS-Kaposi's sarcoma cell
R; Connolly, D.T.; Olander, J.V.; Heuvelman, D.; Nelson, R.; Monsell, R.; Siegel, N.; Hay
X; Title: Human vascular permeability factor. Isolation from U937 cells.
A; Title: Human vascular permeability factor. Isolation from U937 cells.
A; Reference number: A34492; MUID:90062112; PMID:2584205
A; Molecule type: protein
C; Goment: The most common of several alternatively spliced forms is VEGF 165.
C; Goment: The most common of several alternatively spliced forms is veger 165.
C; Goment: The most common of several alternatively spliced from blood vessels
A; Gene: GDB:132244; OMIM:192240
A; Map position: 6p21-6p12
C; Function:
A; Map position: Gp21-6p12
C; Function:
A; Map position: splicing; anglogenesis; dimer; disulfide bond; extracellular proc; Filesty preduct: vascular endothelial growth factor 189 precursor #status predicf Filesty Droduct: vascular endothelial growth factor 121 precursor #status predicf Filesty Domain: signal sequence #status predicted <510>F; 101/Binding site: carbohydrate (Asn) (covalent) #status predicted
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A; Reference number: A44881; MUD: 92274860; PMID: 1592003
A; Reference number: A44881; MUD: 92274860; PMID: 1592003
A; Recession: B44881
A; Accession: B44881
A; Accession: B44881
A; Accession: B44881
A; Recidues: 1-190 < REE>
A; Cross-references: GB: S38083; NID: 9249858; PIDN: AAB22253.1; PID: 9249859
A; Reperimental source: embryo
A; Cross-reference extracted from NCBI backbone (NCBIN: 107622, NCBIP: 107623)
A; Experimental source: embryo
A; Claffey, K.P.; Milkison, W.O.; Spiegelman, B.M.
J. Biol. Chem. 267, 16317-16322, 1992
A; Tolfie; Vascular endothelial growth factor. Regulation by cell differential picture number: A43351; MUD: 9235593; PMID: 1644816
A; Title: Vascular endothelial growth factor. Regulation by cell differential pixologicale type: mRNA
A; Residues: 1-116, ER', 119-190 < CLA>
A; Residues: 1-116, ER', 119-190 < CLA>
A; Residues: 1-116, ER', Megyesi, J.F.; Henzel, W.J.; Ferrara, N.; Folkman, J. Growth Factors 4, 53-59, 1990
A; Note: sequence extracted from mouse sarcoma 180 cells contains vasculand A; Reference number: A61029; MUD: 91197543; PMID: 2085441
A; Residues: 27-38 < ROS>
A; Residues: 27-38 < ROS>
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C; Date: 03-Feb-1994 #sequence revision 03-Feb-1994 #text_C; Date: 03-Feb-1994 #sequence revision 03-Feb-1994 #text_C; Accession: B44881; A43351; A61029
R; Breier, G.; Albrecht, U.; Sterrer, S.; Risau, W.
Development 114, 521-532, 1992
A; Title: Expression of vascular endothelial growth factor A; Reference number: A44881; MUID:92274860; PMID:1592003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37.2%; Score 315; DB 2; 1 llarity 47.7%; Pred. No. 2.9e-24; Conservative 21; Mismatches 45;
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Gaps

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Indels

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Mismatches

146;

Length

Score 282; DB 2; Pred. No. 3.9e-21

PID:9899351

PIDN:CAA61677.1;

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SQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEHPNEVSHIFSPSCVLLSRCS
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A;Molecule type: mRNA
A;Residues: 1-146 <RED>
A;Cross-references: EMBL:X89506; NID:g899350;
                                                                                                                    Query Match
Best Local Similarity 43.9%; Pr
Matches 58; Conservative 20;
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Cibate: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 05-Nov-1999 CiAccession: B40080; B33787; £32255
Ribeung, D.W., Cachianes, G.; Kuang, W.J.; Goeddel, D.V.; Perrara, N. Science 246, 1306-1309, 1989
A/Title: Vascular endothelial growth factor is a secreted angiogenic mitogen. A/Reference number: A40080; MUID:90069608; PMID:2479986
A/Accession: B40080; MUID:90069608; PMID:2479986
A/Accession: B40080; MUID:90069608; PMID:2479986
A/Accession: B40080; MUID:901818306; PIDN:AAA30502.1; PID:g163007
A/Accession: Biophys. Res. Commun. 165, 1198-1206, 1989
A/Title: Vascular endothelial growth factor: a new member of the platelet-derivalence number: A33787; MUID:90121225; PMID:2610687
A/Accession: B33787
A/Accession: B33787
A/Accession: B33787
A/Accession: B33787
A/Accession: B33787
A/Accession: A33255; MUID:99286596; PMID:2735925
A/Accession: A33255; MUID:99286596; PMID:2735925
A/Accession: A33255; MUID:99286596; PMID:2735925
A/Accession: A33255; MUID:99286596; PMID:2735925
A/Molecule type: Protein
A/Recession: A33255
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                                                                                          SQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADEHPNEVSHIFSPSCVLLSRCS
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Pred. No. 3.6e-21,
16; Mismatches 4:
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Similarity 46.9%;
00; Conservative 1
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                                                             16-Mar-1990 #text_change
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C; Species: Bos primigenius taurus (cattle)
C; Species: Bos primigenius taurus (cattle)
C; Date: 16-Mar-1990 #sequence_revision 16-Mar-1990 #text_chang
C; Accession: A33787
R; Tischer, E.; Gospodarowicz, D.; Mitchell, R.; Silva, M.; Sch
Biochem. Biophys. Res. Commun. 165, 1198-1206, 1989
A; Title: Vascular endothelial growth factor: a new member of tl
A; Reference number: A33787
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-120 <TIS>
A; Residues: 1-120 <TIS>
A; Cross-references: GB: M33750; NID: G167810. ......
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alternative splicing
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C; Species: Phasianidae gen. sp. (quail)
C; Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_chaic; C; Accession: 151295
R; Flamme, 1.; Breier, G.; Risau, W.
B; Flamme, 1.; Breier, G.; Risau, W.
Dev. Biol. 169, 699-712, 1995
A; Title: Vascular endothelial growth factor (VEGF) and VEGF: A; Reference number: 151295; MUID:95301109; PMID:7781909
A; Reference number: 151295
A; Reference number: 151295; MUID:95301109; PMID:7781909
A; Residues: preliminary; translated from GB/EMBL/DDBJ
A; Residues: 1-128 < FLA>
A; Residues: 1-128 < FLA>
A; Genetics:
A; Genetics:
A; Genetics:
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Pred. No. 7.9e-21;
9; Mismatches 34;
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Mismatches
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larity 42.9%;
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Best Local S
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(domestic sheep)
#text\_change 05-

R.M

S57956
ovine vascular endothelial growth factor - sheep
C;Species: Ovis orientalis aries, Ovis ammon aries (dc;Species: Ovis orientalis aries, Ovis ammon aries (dc;Date: 13-Jan-1996 #sequence\_revision 01-Mar-1996 #t:Rccession: S57956
R;Redmer, D.A.; Dai, Y.; Li, J.; Jones, S.C.; Moor, R submitted to the EMBL Data Library, July 1995
A;Reference number: S57956
A;Accession: S57956

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EEHSQCECRP-
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A; Residues: 1-188 <TOW>
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A; Introns: 137/2
F;1-21/Domain: sign
F;22-188/Product: v
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                                                                                                                                                                                                                                                                                     virus
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C; Date: 10-May-1996 #sequence_revision 19-Jul-1996 #text_cl C; Accession: JC4679
R; Townson, S.; Lagercrantz, J.; Grimmond, S.; Silins, G.; Nestonem. Biophys. Res. Commun. 220, 922-928, 1996
A; Title: Characterization of the murine VEGF-related factor A; Reference number: JC4679; MUID:96183052; PMID:8607868
A; Residues: 1-207 <TOW>
A; Residues: 1-207 <TOW>
A; Residues: 1-207 <TOW>
A; Comment: This factor is a mitogen, that is selective for lar endothelial growth factors 167 and 186.
C; Genetics:
A; Gene: vrf
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                                                                                                                                 --TKAERRKTKGKRKQSKTPQTEEP
                                                                                                                                                                                                                                                                                                                                                                                        S.B.; Mercer, A.A.;
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G
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C, Keywords: growth factor
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-207/Product: vascular endothelial growth factor r
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                                                                                                                                                                                                                                                                                     14.7K
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3.4e-12;
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Pred. No. 1.8e-
2; Mismatches
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Pred. No.
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                                                                                                                                                                                                                                                                                                             C; Species: Orf virus
C; Date: 07-Apr-1994 #sequence_revision
C; Accession: B49530
R; Lyttle, D.J.; Fraser, K.M.; Fleming,
J. Virol. 68, 84-92, 1994
A; Title: Homologs of vascular endotheli
A; Reference number: A49530; MUID:940764
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KCDCRPRFTTTPPTTTRPPRRRR
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illarity 33.1%;
Conservative 22
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llarity 31.5%;
Conservative 2
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Best Local Similarity
Matches 45; Conser
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A; Status: preliminary
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                                                                                              119
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A, Cross-references: GB:U43837; NID:g1314335; PIDN:AAC52553.1; PID:g1314336
C; Comment: This factor is a mitogen, that is selective for endothelial cells, ar endothelial growth factors 167 and VEGF 186.
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C; Species: Orf virus
C; Species: Orf virus
C; Accession: D49530
C; Accession: D49530
R; Lyttle, D.J.; Fraser, K.M.; Fleming, S.B.; Mercer, A.A.; Robinson, A.J.
J. Virol. 68, 84-92, 1994
A; Title: Homologs of vascular endothelial growth factor are encoded by the A; Reference number: A49530; MUID: 94076465; PMID: 8254780
A; Contents: NZ7
A; Contents: NZ7
A; Accession: D49530
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-148 < LYT>
A; Residues: 1-148 < LYT>
A; Rosidues: 1-148 < LYT>
A; Note: sequence extracted from NCBI backbone (NCBIN: 141422, NCBIP: 141426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYV-EMTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60 LMGNVVKQLVPSCVTVQRCGGCCPDDGLECVPTGQHQVRMQILMI---QYPSSQLGEMSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MLAMKLFTCFLQVLAGLAVHSQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              - FDGPSHQKKVVPWIDVYARATCOPREVVVPLSME
                                                                                                                           --QYPSSQLGEMSL
                       --FDGPSHQKKVVPWIDVYARATCQPREVVVPLSME
                                                                                                 HPNEVSHIFSPSCVLLSRCSGCCGDEGLHCVALKTANITMQILKIPPNRDPHSYV-EMTF
MLAMKLFTCFLQVLAGLAVHSQGALSAGNNSTEMEVVPFNEVWGRSYCRPMEKLVYIADE
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R; Townson, S.; Lagercrantz, J.; Grimmond, S.; Silins, G.; No Biochem. Biophys. Res. Commun. 220, 922-928, 1996
A; Title: Characterization of the murine VEGF-related factor A; Reference number: JC4679; MUID:96183052; PMID:8607868
                                                                                                                                         LMGNVVKQLVPSCVTVQRCGCCPDDGLECVPTGQHQVRMQILMI
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Pred. No. 4e-11;
L; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                            vascular endothelial growth factor-related N; Alternate names: VRF 167 protein C; Species: Mus musculus (house mouse) C; Date: 10-May-1996 #sequence_revision 19-C
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